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# THE REMOVAL OF THE ONION OR GARLIC FLAVOR AND ODOR FROM MILK[1]

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Many pastures in the states south of New York and east of Kansas are infested with the wild plants, *Allium canadense* and *Allium vineale* (1). Effective methods have been devised for the eradication of the plants from cultivated fields, but these methods are poorly adapted to permanent pastures. In the spring and fall—the two growing seasons of the plants—cows eat more or less freely of the green tops. Even small amounts of wild garlic eaten by cows will impart sufficient "onion" flavor and odor to their milk to make it unmarketable (2). In view of the inadequacy of preventive methods and the serious financial loss occasioned to producers of milk and dairy products by "onion milk," recourse to remedial measures would seem justifiable, in spite of the numerous well-founded objections to the excessive manipulation of milk and to the addition of foreign substances.

The unsaturated organic sulfur compounds, such as allyl sulfide and disulfide, produced by members of the *Allium* or onion and garlic family are largely responsible for the flavor and odor of "onion milk." They are volatile at moderate temperatures, and this fact has been utilized in the several aeration methods for their removal from milk (3, 4). Notwithstanding the disadvantages attendant upon the violent agitation of the milk during the longer or shorter periods of aeration, these methods have been successful enough to warrant the manufacture of the necessarily somewhat elaborate machinery for the aeration of large quantities of milk and cream in commercial creameries. Effective aeration of the milk, however, cannot be accomplished without facilities such as are not always accessible.

[1] Published by permission of the Director of the University of Tennessee Agricultural Experiment Station. From the Division of Biochemistry.

The chemical treatment of milk for the removal of the onion or garlic flavor and odor is manifestly a very difficult task. The unsaturated organic sulfides are oxidizable, but they are not more readily oxidizable than the normal constituents of the milk. They form insoluble addition products with salts of mercury, silver, and platinum, but not under the conditions existing in milk. The sulfur in these compounds is comparatively inactive, and offers no chance for the conversion of the sulfides into inoffensive or insoluble compounds by the addition of harmless reagents to the milk. The use of adsorbent filters is impossible because of the nature of the milk.

In experiments with "onion milk" it was found that the substances responsible for the disagreeable flavor and odor are carried almost entirely by the milk fat. When the cream was removed from such milk very little of the disagreeable flavor and odor remained. This fact suggested the possibility of finding a better solvent than milk fat for the malodorous sulfides. Such a solvent must of necessity be a safe addition to a food product and not an adulterant; it must be tasteless and odorless; it must completely remove the onion or garlic flavor and odor with as little manipulation of the milk as possible; and it must be capable of recovery and purification.

In an attempt to find such a substance, a number of waxes and vegetable and animal fats were tested, but without success. Of the hydrocarbons tested, the mineral oils gave the best results. It was found that although a number of these are capable of removing the onion or garlic flavor and odor from milk, to a greater or less extent, the best results were secured with highly refined mineral or paraffin oils. It was necessary only that the oil be properly distributed through the milk, with minimum inclusion of air. As a working hypothesis it was assumed that the organic sulfides are condensed on the surface of the fat globules in the milk and that the mineral oil as it comes into contact with the fat globules dissolves off the sulfides. The most efficient means for the accomplishment of these results remained to be determined experimentally. Details of two typical experiments will serve to make the successful procedure clear.

A measured quantity of milk was poured into a separatory funnel, and one-tenth as much mineral oil added. The mixture was sharply shaken once or twice to break the oil into globules, and then gently shaken to distribute it well throughout the milk. The funnel was allowed to stand for three to five minutes, to permit the oil to rise to the surface of the milk, when the process was repeated. The milk was then drawn off into

a second separatory funnel, a fresh portion of oil was added, and the first process repeated. The first treatment removed the onion or garlic odor from most of the samples, but there was often left a flavor quite perceptible as an aftertaste. The second treatment completely removed any residual onion or garlic flavor from the milk, unless the sample was an exceptionally bad one, in which case a third treatment was necessary.

The oil from the first treatment was slightly yellow and smelled strongly of onion or garlic, and that from all the treatments contained small amounts of milk. It was first washed with water, then with a 10 per cent solution of sodium carbonate, and again with water, in the separatory funnels. After a sufficient quantity of washed oil had been recovered, it was further purified by bubbling air through it, or, better, by passing steam into it. The oil thus obtained was odorless, very nearly colorless, and ready for use a second time. More than ninety-five per cent of the oil used was recovered in this way.

In a second experiment, an ordinary milk bottle or other container that could be closed by a stopper or tight-fitting lid was substituted for the separatory funnel. The relative amounts of milk and oil and the dispersion of the oil were the same as in the preceding experiment. After the second shaking of the container the mixture was immediately poured on a filter or strainer of wet cotton fiber or cloth, through which the milk readily passed but the oil did not. This method of filtration gave a good separation of the mineral oil from the milk. A fresh filter was used for the second and third treatments, which were repetitions of the first treatment. This method is well adapted to farm and household use.

The filters were prepared as follows: A layer of absorbent cotton of sufficient thickness, or several thicknesses of cotton cloth, were placed in a Büchner funnel or ordinary milk strainer, and the cotton fiber then thoroughly wet with water or milk. The perforated bottom of the Büchner funnel or the wire gauze of the ordinary strainer was not a necessary part of the filter. Equally good results were obtained with a filter made of several thicknesses of cotton cloth clamped over the bottom of a strainer without a wire gauze. The oil was washed as described in the first experiment. It was then freed from the washings by filtration on a wet cotton filter and further purified with steam. The amount of oil recovered was about the same as in the experiments with the separatory funnel.

Several kinds of milk were used in the experiments: milk to which allyl sulfide or garlic extract had been added in quantities sufficient to give the milk a strong onion or garlic flavor and odor, natural "onion milk"

supplied by the milkman, and milk from a cow that had been fed one pound of wild onion tops with her evening feed. These samples were all sweet milk of different degrees of freshness, some of them were pasteurized and some of them were grade A raw milk. Their fat content ranged from that of skim milk to that of very rich milk. In general, the best results were obtained with samples of fresh raw milk. Soured milk on which the cream was well risen, and separated cream, gave unsatisfactory results. The method is not applicable to butter. A number of the purified mineral oils on the market were used. All of them absorbed the onion flavor and odor but some of them separated better from the milk than others.

The dispersion of the mineral oil by the shaking of a mixture of the oil and milk has proved to be the most efficient method with small quantities of milk. There are, however, obvious difficulties to be overcome in the application of this method of dispersion to large quantities of milk. Fairly good results have been secured by the rubbing or grinding of the oil and milk together in a suitably constructed mill. This method may be more readily adapted to commercial use.

The total amount of oil required to remove the onion flavor and odor from milk was found to depend somewhat on the richness of the milk in fat and in the objectionable constituents of onion or garlic, and, to a limited extent, on the temperature at which the treatment was carried out. An increase in the amount of oil used in the first treatment did not obviate the necessity for a second treatment. Excellent results were obtained by the treatment, at room temperature, of 400 cc. of fresh raw milk, the fat content of which varied from 1.8 to 5.8 per cent, and to which 0.4 cc. of a 0.25 per cent solution of allyl sulfide solution had been added, with 40 cc. of mineral oil.

No satisfactory chemical methods for the detection of substances causing the onion flavor and odor in milk have been found. The senses of taste and smell, however, have been found to serve all practical purposes. Exceedingly small additions of allyl sulfide or garlic extract are readily perceptible. Milk containing 0.25 mg. of allyl sulfide per 100 cc. may be roughly compared to a moderately bad sample of "onion milk."

It was of importance to determine whether the composition of the milk was changed by its treatment with mineral oil. Inasmuch as mineral oil has been used to remove proteins from solution, it was of especial interest to determine whether the treatment caused any loss of milk protein. Analyses of samples of untreated and treated milk indicated no loss of protein, carbohydrate, or ash. There was, however, a small loss of fat

during treatment of the milk. In these analyses the ether extract was weighed as crude fat. It was possible that a part of the loss in milk fat was compensated for by a gain in mineral oil. It was therefore necessary to determine with accuracy the amount of fat gained by the mineral oil. Saponification values were determined for the ether extract from untreated and treated milk and for fresh and used mineral oil. The saponification values were slightly lower for the fat from the treated milk. The recovered mineral oil contained a small amount of saponifiable matter, whereas the unused oil contained none. One gram of used mineral oil required 0.54 cc. of N/2 KOH for its saponification. From experiments covering a range of temperatures from 15°C. to 65°C. it appeared that the least amount of fat was gained by the mineral oil when the temperature of the milk was about 40°C.

Since butter fat is miscible with mineral oil it seemed possible that the amount of mineral oil left in the milk might affect the butter-making quality of the cream. In order to test this possibility, cream from treated and from untreated milk was churned. The two samples of cream churned equally well and gave butter of equally good quality.

## REFERENCES

1. Wild garlic and its eradication. Purdue Univ. Bull. 176 (1914).
2. Effect of garlic on flavor and odor of milk. U. S. Dept. Agr. Bull. 1326 (1925).
3. Removal of garlic flavor from milk and cream. U. S. Dept. Agr. Bull. 608 (1914).
4. Hunziker, O. F. *Dairy Science* 8, 132 (1925).

# DEVELOPMENTS IN THE BETTER HOMES CAMPAIGNS

JAMES FORD

*Better Homes in America*

The value of any civic movement is gauged in part by its extent but chiefly by the quality of its service. The fact that the Better Homes in America movement has grown from 760 local campaigns in 1924 to 2965 in 1926 is an indication of increasing interest. But the fact that the local programs have shown more insight as to community needs and greater ingenuity and effectiveness in meeting those needs is more significant. This improvement in the quality of the local programs is unquestionably due in large part to the cooperation of home economics teachers, home demonstration agents, and other trained specialists. Training combined with enthusiasm, good judgment, and a definite need to be met is invincible. Under experienced leadership, complete cooperation is forthcoming and outstanding achievement the outcome.

It is the untiring, intelligent work of local committees which has made the Better Homes in America movement the valued factor in the improvement of the American home which we now find it to be. The chairmen of the local committees, chosen with care among the experienced civic leaders in community undertakings, have in large part studied their local needs of housing, household management, and home life with some care before preparing their programs. The national headquarters of the organization have been careful to avoid standardizing the programs of the campaign, so that there would be the utmost scope for local initiative. The local committees have been made up of representatives of all civic organizations interested in home improvement, so that a considerable mass of experience and of interest in the home from varied angles has been at the service of the community. The result demonstrates the value of this method of organization. The wide variety of types of local demonstrations was more apparent in the campaign of 1926 than ever before, for hundreds of committees have now had experience in conducting campaigns over two or more years, and each year are better able to discover ways of creating new interest or of contributing more effectively to the solution of old problems.

Santa Barbara, California, in 1926, demonstrated nine houses, ranging in size from four to six rooms and in cost of construction from $2,000 to $5,540. Four of the houses were furnished on budgets amounting

to not more than 25 per cent of the cost, but in one of the demonstration homes, a six-room stucco house built by a colored minister and furnished with refinished furniture, the expenditure was $27, which was invested in curtains and paint. The other $2,000 house was built by the Associated Charities Housing Committee and planned by students in the high school architectural drawing class. A small house and garden competition conducted in Santa Barbara offered prizes for the best four, five, and six-room houses recently constructed, for the best small house and garden, and for the best small garden. Scores of houses and gardens were entered in the competition and tours of these houses were conducted for the population of Santa Barbara over a period of many weeks. The Santa Barbara programs have been particularly distinctive in architectural quality and the wide extent of community interest. The experience of the committee under the direction of Miss Pearl Chase, secretary of the Community Arts Association, made it possible to exercise a profound influence upon the architectural standards incorporated in the rebuilding of the city after its earthquake of 1925, and is making Santa Barbara famous as one of the leading garden cities of America.

Another significant undertaking has been the movement for the establishment of permanent home information centers. The Alice Ames Winter house at Minneapolis, built in the Better Homes Campaign of 1925 by the Women's Community Council and the District Federation of Women's Clubs, and opened in the campaign of 1926, offers a striking example of a well-equipped home center with a year-round program, involving daily lectures, discussions, and demonstrations for groups representing every quarter of the city. It was built from one of the plans of the Architects' Small House Service Bureau. Being on sloping land, it could be provided with a demonstration room in the basement which includes a large, well-equipped demonstration platform. Large numbers of people can thus be accomodated at any hour of the day in classes conducted on each of the three working floors of the house.

A new permanent Girl Scout home information center was built in the 1926 campaign under a special committee headed by Mrs. Horace Hare, Girl Scout commissioner of Philadelphia. It is on park land within the Sesqui-Centennial grounds, and now that the exposition is over will be used as a training center for the homemaking activities of Girl Scouts. It was built from another one of the plans of the Architects' Small House Service Bureau, illustrated in the Better Homes Plan Book, and has proved well adapted to its use. The Girl Scout home information center at Cedar Hill, Waltham, Massachusetts,

—a remodeled farm house which was opened in the 1925 campaign—has a continuing year-round program, less comprehensive in scope, and was opened to the public with appropriate programs during Better Homes Week of 1926. Several other such centers are being planned in the 1927 campaign.

The study of home management houses and home economics cottages, made by Miss Blanche Halbert, has led to an increased interest in this movement and to the demonstration of scores of such houses during the 1926 campaign. The interest of the local populace in permanent and appropriate training of school and college girls in household management and the art of homemaking has been aroused and useful adult instruction during Better Homes Week has been provided. Several communities, large and small, are contemplating the erection of such houses in the 1927 campaign.

In six communities, houses built by boys enrolled in vocational classes of the public schools were demonstrated to the local public during Better Homes Week of April, 1926. The best of these, built from the Architects' Small House Service Bureau plan 6-A-37 in Utica, New York, was furnished by pupils in the home economics classes. Other such houses were built in Everett, Washington, and Stockton, California. The boy-built home economics cottages at Port Huron, Michigan, St. Helena Island, South Carolina, and at Brownwood, Texas, were also demonstrated. At Pullman, Washington, a very attractive house of eight rooms was constructed from plans drawn by students in design.

Remodeled houses were demonstrated in communities large and small. In Atlanta, Georgia, an old house valued at $2,625 was remodeled and reconditioned as a modern home for a wage-earner by children in the grade schools. Each step of the job was carefully considered and the problem it presented was assigned to classes as regular school work. Booklets were prepared, giving cost figures and other data, so parents and children alike profited by this careful study of the methods of making an old and unsatisfactory house into a satisfactory, well-equipped home.

Many campaigns were designed to help particular groups of the population. The one at Fullerton, California, was particularly effective in its graphic demonstration of the possibility of home improvement for Mexican laborers. A number of demonstrations for and by negroes showed the possibility and importance of instructing and helping them in the task of home improvement and many barrels of whitewash were

consumed in the process with results which were unquestionably of great value from points of view of both sanitation and civic beauty.

The number and quality of rural campaigns have shown notable increase, due to the very effective cooperation of the Extension Service of the U. S. Department of Agriculture and of state and county home demonstration agents. The members of the Extension Service have found that their own work is materially helped by the appointment of local Better Homes committees whose chairmen they ordinarily nominate. Such committees enable the Extension Service to reach each community more effectively and National Better Homes Week provides an opportunity to head up their year-round activities with special far-reaching programs in which all rural citizens of all ages can cooperate.

Distinctive among such campaigns was that of Prince Georges County, Maryland, where two new houses and several remodeled farm houses of varying sizes and costs were demonstrated, each in a different community. In Bovina, Mississippi, an old house, owned by the community and used as the home of the school principal, was remodeled and reconditioned by the whole community—men, women, and children each being assigned special tasks. In Montgomery County, Tennessee, two new cottages, one costing $3500 and the other $2500, were built and demonstrated. In Prince Edward County, Virginia, an attractive five-room house, designed in large part by the committee, was built at a cost of only $1872 and furnished very pleasingly for a total of only $700. In Tuscaloosa County, Alabama, the kitchen of the house purchased by the county authorities to use as a library and as offices for the County Department of Education and the home demonstration agent, was completely fitted up as a model kitchen and permanent information center, the changes being made by the women of the county.

One of the most striking of the rural campaigns was that of Pulaski County, Arkansas. Under the direction of Miss Minnie T. Allen, county home demonstration agent, the local committees at Ferndale, Jacksonville, Mabelvale, and Sweet Home each demonstrated a house. The houses at Mabelvale and Ferndale were remodeled. In the other two communities new homes were demonstrated. The demonstration at Mabelvale was notable because an old shack, which for many years had been used as a storage barn, was reconditioned by the women of the community through their own labor. It was convincingly demonstrated that in that quarter of the county at least a charming little rural home can sometimes, by the application of intelligence and effort but relatively little money, be brought within the reach of the poorest unskilled laborer's family.

The prospects for the 1927 campaign are particularly good. The number of chairmen who have already accepted appointments is considerably larger than at the corresponding period last year. Committees are beginning their work earlier and are approaching their problems with the skill which grows out of experience and with an enthusiasm which is born of the unquestioned values of their earlier campaigns. Many communities are entering into the campaign with vigor; so there is every reason to believe that during Better Homes Week—April 24 to May 1, 1927—the educational campaign for home improvement will reach effectively several million of the citizens who are most in need of its help. In many states, the state supervisor of home economics and the state home demonstration agent assure us that the campaign will be observed in every county. Parent-teacher associations are showing an unusual amount of interest. Women's clubs, chambers of commerce, and other civic organizations continue to cooperate.

For the best results, the interest and service of home economics specialists are needed in every local campaign and will be deeply appreciated by the local committees. National headquarters of Better Homes in America, at 1653 Pennsylvania Avenue, Washington, D. C., will be very glad to let any member of the American Home Economics Association know the name of the local chairman appointed for her community and to send upon request a copy of their 1927 Guidebook.

# THE PREPARATION OF FURS: FUR DYEING

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Fur dyeing is not a simple process like dipping an Easter egg or a pair of silk stockings in a solution of some made-to-order dyestuff. I have been asked time and again by thrifty women, "Where can I get dyes, and instructions for their use, to dye my fur collar?" and my answer, in polite variation, must always be "Fair lady, forget it."

To begin with, we do not use colors, we use chemicals, and we pay expert chemists quite liberally to handle them. For if they are used unwisely, several things may happen. First, they may affect some of the qualities of the dressed fur and undo all the work the dresser has done. Then unless they are applied at a temperature below or about 40°C., they will shrivel up the skin and ruin it beyond hope of repair. And, finally, unless put on in exactly the right manner they will rub off, or crock.

Some kinds of furs, such as seal-dyed-muskrat, are dyed by brushing a pasty substance on the fur and later, when the paste is dry, whipping it out of the fur. Others are first dyed in vats of liquid and then have a paste or a liquid brushed on. Still others are immersed in one chemical bath after another or have one or more brushings of liquid. Sometimes wood extracts are used as dyes. Sometimes a coal-tar product is applied and then oxidized. And again these processes are combined. It is not at all simple. It cannot be a simple matter because different skins vary chemically and physically and the same chemical applied to two different skins may produce different results. If an amateur attempts to dye a piece of fur with coal tar dyes, the chances are that she will remove the fur from the skin, quite neatly, or singe the fur until it looks like a woolly lamb.

The first step in fur dyeing is to "kill the fur," as the process is called. Each fur fiber is naturally coated with a fatty substance which is impervious to dye solutions and which must be dissolved before the fur will absorb the dyestuff. This is done by the application of such chemicals as ammonia, caustic soda, or caustic lime, either by brushing on the solution or dipping the skins into it. After this, they are carefully rinsed and then treated with a mild acid to neutralize the alkali that may still be present. They are again rinsed to ged rid of excess acid.

Then comes the mordanting process, which will help to fix the dye in the fur fibers and, in some cases, assist in the coloration somewhat. The

mordant is fixed by the hair, becomes an integral part of the hair, and combines with the dye to form the color. It is a link between the hair and the dye. Mordants are salts of such metals as aluminum, iron, cromium, copper, and tin.

Austin[1] gives an interesting account of the action:

> The constituents of the hair seem to bring about a dissociation of the metallic salt, and the oxide, or hydroxide, as the case may be, is absorbed and firmly fixed by the hair. Just what the manner and nature of this fixation are, is still uncertain. It is supposed that chemical combination takes place between the hair and the metal. The course of this process may, as far as is known, be described as follows, taking for example, the case of cromium sulphate: In dilute solution, this compound gradually dissociates first into basic salts, and finally into the hydroxide, the breaking up of the neutral salt being induced by the presence of the fur-hair.
>
> $$Cr_2(SO_4)_3 + 2H_2O = Cr_2(SO_4)_2(OH)_2 + H_2SO_4$$
> $$Cr_2(SO_4)_2(OH)_2 + 2H_2O = Cr_2(SO_4)(OH)_4 + H_2SO_4$$
> $$Cr_2(SO_4)(OH)_4 + 2H_2O = Cr_2(OH)_6 + H_2SO_4$$
>
> The reactions take place within the fiber after the hair has been impregnated . . . . forming thus some complex insoluble, organic compound of metal within the hair.

The dyes used after killing and mordanting may be mineral, vegetable, or coal-tar products, or combinatons of two of these.

Mineral dyes are seldom used alone nowadays. They are brushed on the fur, a sulfide or oxide of the mineral being precipitated on the fur fiber. Lead and potassium permanganate were formerly used somewhat for this purpose, but I doubt if they are ever used now by the dyers working for our trade.

Vegetable dyeing may be divided into two types, first, where materials are used in which tannin plays a prominent part, as in nut-galls, and second, where extracts of various woods are used, such as logwood, fustic, Brazilwood, quercitron, and acacia.

These materials in solution, applied by either the brush or the dip method, produce certain color effects dependent upon the nature of the mordant employed. Logwood, for example, with iron mordants, give gray to black; with copper, green-blue to black; and with tin, purple shades.

Time is a costly factor in wood dyeing, but as long as the results with

[1] Principles and Practices of Fur Dressing and Fur Dyeing. New York: D. Van Nostrand and Company, 1922.

coal-tar dyes were uncertain the wood dyes held their own. When these coal-tar products were perfected and their action was understood, the use of wood dyes became secondary, for the saving in time was enormous and moreover there is a far greater range of color within reach of the fur dyer using these interesting chemicals.

The first coal-tar dyestuff to be generally used was aniline black, a product of the oxidization of aniline, a colorless liquid turning brown on exposure to the air.

In fur dyeing we cannot use aniline black. It is insoluble at low temperatures and we cannot use high temperatures without destroying the skins. In any case it would merely coat the surface of each fur fiber and easily rub off. So we apply aniline itself, in solution, and then treat it with acid, producing an aniline black which is an integral part of the fur and, consequently, a fast color.

Other coal tar products knows as ursols are now in more general use than aniline. They also are applied in solution, joining with the mordant to become a part of the fur just as truly as the natural pigmentation is a part thereof, and finally being oxidized by some such suitable agent as hydrogen peroxide.

The oxidization of the chemical being completed, the skins are washed, dried, drummed, screened, and whipped, as in the dressing process. But as the solutions have in some measure affected the nature of the skin, the latter again have animal or vegetable oils worked into them before they go to the manufacturer of fur garments.

Bleaching is used with certain furs. It is essential in the preparation of white furs. White fox, ermine, and white kids or lambs are seldom uniformly pure white over the entire pelage. There are cream or yellowish phases that must be cleared up and stains of various kinds must be removed. Some dark furs such as beaver are improved by partial bleaching. Sulphurous acid and hydrogen peroxide are the bleaching agents usually employed, the skins being first carefully washed with some degreasing solution, weakly alkaline.

# THE CONTRIBUTION OF THE HOME TO THE PREPARATION OF THE CHILD FOR LIFE[1]

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In casting about for a statement of what would generally be accepted as factors in the adequate preparation of the child for life it occurred to me we might well take the international children's charter. This charter, or Bill of Rights, was drawn up by the International Save the Children Fund in February, 1923, and, after some revisions, was endorsed by the Assembly of the League of Nations in September, 1924.[2] The original English draft as presented to the British Fund in 1923 reads:

> Irrespective of race or class, politics or creed, every child should: First, be born in health and honour, and nurtured under healthful conditions. Second, every child should be preserved in health and succoured in sickness and distress and rescued when in error. Third, every child should have opportunity for physical, mental, and moral and spiritual development. Fourth, every child should be brought up as a member of the human family, conscious of its kinship with all other children and prepared to play its part in the service of its fellows.

The adoption of this concrete statement of the fundamental rights of childhood by the nations of the world is significant and presents a definite challenge to that human institution which exists, fundamentally, for the sole purpose of producing and fostering the child, namely the family, or to use that other comprehensive term which adds the concept of environment and relatively fixed habitat, the home.

It is highly appropriate that home economists should consider the part the home plays in preparing the child for life. If, as we begin to believe, the home permanently conditions the child, physically and emotionally, before the school has a chance at him, and if the school assumes a responsibility, as we now believe it should, for preparing the child to the full extent of its opportunity for the simple business of living, pre-parental training in all its aspects becomes of vast human importance. It there-

[1] Based on a paper read before the American Home Economics Association, Minneapolis, June 29, 1926.

[2] The form finally adopted is commonly known as the Declaration of Geneva and was printed in the JOURNAL for June, 1926. This opportunity is taken to call attention to a recent official correction in the English translation as there given: in each of the five sections the introductory words should read "The child should" instead of "The child must."—EDITOR.

fore becomes necessary for the home and school to agree upon the order and emphasis in values in what we are pleased to call training and preparation for life. There must be no violence and disruption in the experience of the child as he passes from the home to the school and the school to the the home. Here lies one of the essential difficulties of the past and, to an extent, of the present: the school has ignored the home, and the home has had little contact with or understanding of the school. The child has therefore led a dual, or, more correctly, a triune existence, comprising the child the home thought him to be, the child the school thought him to be, and the confused little entity which he kept within himself and which no one ever fully saw or fully understood.

Fortunately for the child, with the evolution of the human race and human philosophy we are passing out of the period of exaltation of intellect through the period of exaltation of physical health—an orderly sequence, by the way, for we had to have trained intelligence before we could achieve the simple, basic needs of an efficient human machine. If I mistake not the signs of the hour, we are entering upon an era of exaltation of personality. In other words we are, at last, trying to consider the child as an entity.

The international bill of children's rights places first the right of every child "to be born in health and honour." It is well to recognize at the outset that there is a limit to what can be done by home, school, society, or any other agency, for the child who is born in physical, mental, or social dishonor. In order to achieve the inspiring world ideal that every child shall be born in honor it will become necessary to inculcate into all human thinking a pervasive realization of the importance of clean and adequate human inheritance.

The responsibility for developing clear, clean thinking and a biological consciousness checks up definitely to the home, and begins with the first unfolding of the child's inquiring mind. Then as the child grows, his home should give him, and, having his confidence, will be in a position to give him, a sense of racial responsibility, a desire to know his own inheritance, an interest in the manner of gifts he may bestow upon his posterity, and an intelligence in mating, such as will at least tend to minimize the volume of human wreckage which from birth is doomed to dependency and suffering.

Assuming that the home has endowed the child with a normal mind and body our charter next stipulates that he "shall be nurtured under healthful conditions and preserved in health." Mothers everywhere are striving to become intelligent in the matter of conserving the health of their chil-

dren. Simple, basic, practical information is available through pamphlets, books, periodicals, lectures, films, and clinics. There is small excuse for any mother's not knowing how a normal child should eat, sleep, and be clothed, at least in so far as authorities agree. The U. S. Bureau of Home Economics, the Federal Board for Vocational Education, the U. S. Children's Bureau, the American Child Health Association, the various state child hygiene departments, and many other agencies dispense excellent instruction at little or no cost to the mother. Many a mother who is not sufficiently intelligent to appreciate the importance of the "rules of the game" and to enforce them, hastens to explain why Mary does not drink a quart of milk a day or sleep alone, showing that she does know that these are now the accepted health practices.

If the child lives in an orderly household in which all eat and sleep an bathe regularly, he will acquire these habits during his imitative years, happily, unconsciously, and permanently. If disorder has become a habit in the life of the mother, there will be difficulty for the child. He will need strong character to break a fixed habit of disorder, particularly with reference to his physical habits.

The third provision in the children's charter is that every child should have "opportunity for physical, mental, moral, and spiritual development." It was a fine feeling for the unity of the child which prompted the wording of this clause. Dr. Gesell says in the preface to "The Preschool Child,"[3]

> Our first solicitude should be, as it has proved to be, the physique of the child; but the child cannot even become a good animal unless he is wholesomely trained and organized through mental and motor habits. He must be properly domesticated. Herein he lies at the mercy of his parents, for his more intimate personal hygiene must be attained through his parents. This whole problem of adequate domestic training profoundly involves educational issues touching parent and child alike. It is not surprising, therefore, that there are many signs on the social horizon which show a steady drift toward bringing the preschool period more completely under educational control. . . . . There should be no false distinction between bodily care and spiritual training. The preschool child is a unit and there is really but one hygiene and this is developmental hygiene.

The new psychology and the new biology are placing new value upon the early years and agree that no strict separation can be made between

[3] The Pre-School Child. By Arnold Gesell. Boston: Houghton Mifflin Company, 1923.

physical structure and function on the one hand and mental and emotional behavior on the other. As the perfume and fruit of the flower are related to the efficient structure of the root, so the unfolding personality has its root in the structures of the developing body. Conversely, just as the leaf must convey the treasures it gathers from light and air to the root, so the body of the child is directly affected by the forces of emotion and sensation. We must give the child the clear sunlight of understanding and the gentle dew of loving control.

The little child's home is his world, his source of health and happiness and basic attitudes toward life. This places a delicate and tender responsibility upon the home, which parents, themselves the product of imperfect evolutionary development, have often met with sincere but crude methods.

When we have effectually eliminated physical indignity from our management of children we shall have set up our first ethical, educational, and social milestone. Parents have ever subjected their children to physical and spiritual humiliation, partly in expression of their own untrained emotions, partly in the belief that force is a legitimate agent in education, but chiefly because they were ignorant of the devastating effect of fear and physical indignity upon the personality of the child, or even of the fact that the child has a personality.

The child of today becomes lawless and anti-social, not so much because the rod is spared and he is indulged and pampered as because too often he is expected to find his joy and pleasure and chief occupation in forever adapting himself to the adult activities of a crowded household. The present rapid restriction of the space in the average home is increasing the repression and the conflict of interests and needs. No wonder the child learns to snatch fragments of satisfaction by trickery and cunning.

He is highly sensitive to inconsistencies in parental conduct—also equally sensitive to integrity, sympathy, and understanding (something quite different, by the way, from sentimental indulgence). He will not know how to put his reactions into words but he invariably puts them into conduct either in a positive or a negativistic way. A child may be so excessively trained in cleanliness and order that he will hate these very desirable things to the end of his life.

Surround him with sunlight, serenity of family relationships, and sufficient space and freedom to find outlet for his normal, exuberant activity without constantly impinging on other personalities and interfering with adult convenience, and he will train himself and educate himself and do a well-rounded job of it.

The fourth stipulation of the children's charter is a fitting climax: "Every child should be brought up as a member of the human family, conscious of its kinship with all other children and prepared to play its part in the service of its fellows." In order to be consciously a member of the human family, the child must first have a really conscious kinship with his own family. The family institution would seem to be participating largely in the prevalent social fluidity. The formerly rigid demarcations of the activities and interests of the family group are rapidly merging into community activities and interests. It seems necessary for educational and social agencies to help the home in securing and maintaining all the fundamental rights of childhood which we have here discussed. It would be fatal to this ideal to have these agencies go too far in actually taking over the functions and responsibilities of the home. The school, in all its fine, present-day effort to prepare the child for life, should, above all, try to strengthen the bond between the child and his home, and hold ever before the child a lofty ideal of what the home of the future should be.

Our home economics teaching should constantly bridge the gap between theory and practice, especially in the vital matters of preparing girls for bearing and rearing children, and aid the homemakers of the future to form ideals which shall help to determine the character of the future home. In this sense home economics is helping to determine the destiny of the child.

# EDITORIAL

**The History of the Ellen H. Richards Memorial Fund.** With the passing of that dynamic personality, Ellen H. Richards, on March 30, 1911, the American Home Economics Association lost not only its founder, but its leader. A fitting memorial was sought, such as would have won not only the approval but the personal interest of Mrs. Richards. After careful thought and with a full realization of the task ahead, a group of Mrs. Richards' special friends on June 6, 1911, began the raising of the Ellen H. Richards Memorial Fund. By 1914 not quite $3,000 had been raised, and the trustees of the fund recommended a drive for $25,000, an amount whose income would provide one or two research fellowships. The work was not pushed for some time, however, first because it was agreed that a fund to support an executive secretary for the Association was more urgently needed and later because of the war. Since 1924 the $25,000 fellowship fund in memory of Ellen H. Richards has again become the chief money-making aim of the Association. At the annual meeting in 1926 the Association adopted the recommendations of the trustees to attempt to complete the $25,000 by May 1, 1928, and to apportion the amount among the state home economics associations. The quotas assigned were published in the December JOURNAL.

The status of the fund as shown on the treasurer's books December 10, 1926, was as follows:

| | | |
|---|---|---|
| Cash | | $1,281.77 |
| New York Mortgage | | 3,000.00 |
| $2,000. | Midvale Steel and Ordinance 5's, 1936 | 1,904.28 |
| $2,000. | Great Northern Ry. 5's, 1973 | 2,027.19 |
| $1,000. | International Paper Co. 5's, 1947 | 931.72 |
| $1,000. | Standard Mortgage 6's, 1930 | 1,000.00 |
| | | $10,144.96 |

The trustees have been heartened by the cordial response already received from many states. Even though their quotas are large, several associations have already pledged themselves to fill them at the dates assigned. The announcement made by the committee on awards on page 84 shows that even by 1927 the size of the fellowship will be increased to $500. By 1928 we hope for at least two of this value.

In coming issues of the JOURNAL various friends of Mrs. Richards will tell of special aspects of her life and work. Meanwhile, if any wish more complete knowledge, they will find it in the sympathetic, carefully-written biography by her friend, Caroline L. Hunt[1] and in the Memorial Number of the JOURNAL OF HOME ECONOMICS, October, 1911.

**Ellen H. Richards Graduate Fellowship in Home Economics.** The Ellen H. Richards Memorial Fund announces a graduate fellowship of $500 for the year 1927–28. Candidates must hold a bachelor's degree from an approved institution and submit evidence regarding personality, scholarship, and probable ability in research as attested by three or more references. Candidates must present a brief statement of the proposed problem of research with plans for its development, specifying the institution where the research will be carried on. The research may be either in home economics or in some contributory field such as sociology, economics, child welfare, or the fine arts.

Applications, including a statement of the candidate's degrees, training, and experience in home economics, may be sent to the national headquarters of the American Home Economics Association, 617 Mills Building, 700 Seventeenth Street, N. W., Washington, D. C.

**Executive Committee Meeting.** Eleven out of fourteen members were present at the meeting held at the American Home Economics headquarters in Washington on November 18 and 19. Besides routine business one of the important decisions made was on the dates of the coming annual meeting at Asheville, North Carolina, June 21 to 24 inclusive.

The following were appointed as the program of work committee for 1926–27: Jean Krueger, chairman, Gertrude Warren, Ivol Spafford, Jessie Whitacre, Florence Busse Smith, Florence Winchell, Ada B. Swan, Marie Mount Harriet Goldstein, with Lita Bane and Alice Edwards, ex-officio. It will be remembered that at the Minneapolis meeting of the Association it was voted to make this one of the committees serving throughout the year instead of only at the time of the annual meeting, and that for the current year the appointment was left to the executive committee.

Margaret Edwards, staff associate in the division of health education,

[1] The Life of Ellen H. Richards. By Caroline L. Hunt. Boston: Whitcomb and Barrows, 1922.

American Child Health Association, was appointed to represent the American Home Economics Association on the National Health Council.

The study of 1920 census data decided on at the last annual meeting was reported as well begun under the direction of Dr. Hazel Kyrk of the University of Chicago. In addition to the $2500 appropriated by the American Home Economics Association Dr. Kyrk has obtained a similar sum from the Local Community Research Committee of the University of Chicago under the terms of its grant from the Laura Spelman Rockefeller Memorial, which will match funds given by organizations or individuals for research approved by the local committee. The data, which have been specially tabulated by the Bureau of the Census, concern the size, composition, and domicile status of families; and Miss Day Monroe, who is this year doing graduate work at the University of Chicago, is carrying on the study under Dr. Kyrk's supervision.

**A Message from the International Committee.** The International Committee of the American Home Economics Association is eager to send copies of home economics books as well as subscriptions to the JOURNAL OF HOME ECONOMICS to fellow teachers in the foreign field. Many teachers are doing fine work with only the crudest material to help them. How much more they could accomplish if they were given copies of some of the excellent books which are now on the market!

Teachers of home economics, if you have found a book which has proved especially helpful to you, won't you send a copy of it? The committee will see that it is sent to a place where it will help in the teaching of home economics.

Authors, haven't you a complimentary copy of your latest book which you would like to introduce to the foreign field?

Girls' clubs, wouldn't the making up of a home economics bookshelf be a good project for your work this winter?

Any or all of you, please send your contributions to Miss Grace Reeves, Teachers College, Columbia University, New York City.

This is really a chance to enlarge your horizon as well as to help another teacher. If you begin sending books and magazines to girls studying home economics in foreign countries, you will begin to be more interested in the places you reach out to.

**Student Clubs.** On page 89 is found the account of the student club at the New York State College for Teachers, which has been given

first place among those submitted some months ago by clubs in teacher-training schools. It may be more than a coincidence that it comes from a school where the head of the home economics department, Miss Florence Winchell, has been so actively interested in the general development of student clubs, but that in itself would not account for the ingenuity displayed by the girls or for the readable form of their report.

Honorable mention is also made of the paper sent by the club of the Michigan State Normal College at Ypsilanti.

**The Home Economics Building, University of Tennessee.** The Building shown in this month's frontispiece is quite able to win praise on its architectural and practical merits; nevertheless it has an added interest because it is the first of such buildings built for and devoted to home economics at a southern university.

The department of home economics, first organized in the University in 1904, had not been adequately housed, especially during the last few years when it had grown very rapidly. Plans for a new building had long been in the making in the department, and in 1925 the work actually began. The building has an ideal position on a hill opposite the University. Built of polychrome brick with cast stone trimmings, it has beauty of color as well as structure. The building is planned for two wings, only one of which is built. The total length is one hundred and sixty feet and the total cost was about two hundred thousand dollars without equipment. One of the outstanding features is the almost noiseless rubber stone tiling used in all the halls and in the food laboratories. In the basement is a laundry and lockers for the students' wraps. On the first floor a reading room for students is separated from an assembly room by French doors. When the rooms are opened together, the seating capacity is about two hundred. Class rooms, offices, and a student rest room are also on the first floor. The second floor is devoted to textiles and clothing, with ample display cases and storage closets, a teachers' rest room and offices, a student sewing room, and built-in lockers. The foods laboratory, a small dining room, the research food chemistry laboratory, and a lecture room with a well-equipped demonstration table are on the third floor. In the halls on the third floor are built-in lockers for the students, where they keep their aprons. Finally, up in the attic is a well-equipped laboratory for animal experiments.

The South is justly proud of this, its first university building for home economics, and grateful to those who have set so fine an example. High

among the latter must be ranked Miss Nellie Crooks, the director of home economics at the University of Tennessee, for to her faithful work, her expert knowledge, and her good judgment are due much of the beauty and practical convenience that characterize both the building and its equipment.

**As Others See Us.** When some power does on occasion see fit to gie us the giftie so eloquently wished for by Bobbie Burns, it sometimes happens that we are more conscious of a sense of injustice, or it may be of wounded vanity, than of a desire to reform. Individual readers must decide what feeling should predominate in a good home economist on perusing the following translation of a paragraph in the preface to a new French book on bonbons by H. Rousset:

> Most of the recipes here assembled come from American publications: the fact is that the home preparation of sweets in that country has attained an importance the equal of which would be vainly sought elsewhere. Candy-making is an integral part of feminine yankee education, and in many of the universities attended by girls the recipes for fudge (*nougats*) taught by chum to chum constitute the most lucid part of the educational baggage that the young laureate carries away from her alma mater. For life soon buries in oblivion the greek and latin she has learned, while the preparation of fudge is so practical, so useful, so often turned to profit that she can never forget it!

**The Art of Living.** An English newspaper recently paid an enviable compliment to the Women's Institutes of that country. *Home and Country*, the Women's Institute journal, makes exciting reading, says this admirer,

> not because of sensational fiction or tragic chronicles, but just because it arouses one's enthusiasm for what is being done and for what may develop out of such a movement. Neighbourliness—without which life anywhere is dull and savourless—is the first instinct aroused. And next, I think I should put the art of living. Not that the Women's Institutes themselves would call it so, perhaps. But to open people's eyes to the beauty lying unnoticed around them, to give them the joy of making pleasant things, is surely helping them to get the best out of their lives. All kinds of handicrafts are taught and eagerly learned; all kinds of country work, such as gardening, poultry-rearing, bread-making, and so on, encouraged; and among entertainments, amateur acting takes a foremost place, a significant sign, by the way, of the times.

Such a tribute makes one wonder whether our home economics extension workers or our home economics workers in general appreciate

how vital to the accomplishment of our aim, the improvement of living conditions, is the cultivation of this art of living, or how many opportunities to develop it are lying close at hand. Is the "joy of making pleasant things" emphasized along with the practical value of making useful ones? Must a play or a pageant always serve as a means of raising money or driving home a truth, or may the mere pleasure of arranging it and acting in it sometimes be sufficient justification?

All of which recalls a talk on "Why Men Work" which Dr. Richard C. Cabot of Boston made last spring at a conference on practical psychology in business. As reported in *The Human Factor*, he gave some dozen answers to his original question, such as restlessness, financial motives, desire to dominate or to retain self-respect, and then raised the other interesting question of whether it was best to try to get all of the man into his work. "His answer was no. No other nation but America thinks so. The chief part of a man's affections, his worship, or his recreation should not be found in his daily work."

**Textile Section Fellowship.** The Textile Section of the American Home Economics Association announces that a fellowship of $300, to be used in textile research, will be available for the school year 1927–28. The conditions of award will be similar to those governing the fellowship provided by the Section last year and described in the JOURNAL for February, 1926. Detailed information will be given next month.

# OPEN FORUM

**The Home Economics Club of the New York State College for Teachers, Albany.** In this, the fourth year since the formation of our Home Economics Club, it is comparatively easy to trace our history because of the youth of the organization. The need of a club had been in the minds of the students in the home economics department for a number of years. The first action was taken by the senior class of 1922. In the spring of that year the students of the three highest classes organized and appointed committees for the preparation of a constitution and by-laws. The aim which was formulated by our founders is to pursue more thoroughly the study of home economics, to promote good fellowship and cooperation among the students, and to promote loyalty and service to our department and to our Alma Mater. We are pleased to be able to say that with the excellent start given us by our alumnæ, we have been able to attain a one hundred per cent membership of our home economics student body.

One of the factors in our growth has been our affiliation with the New York State Home Economics Association in 1925. At the spring meeting of the Association in that year one of our members was appointed chairman of the standing committee on student clubs. As a result of this honor our club became more interested in the student club movement and helped to carry out its work. The purpose of the student club committee is to help promote activity in existing student clubs, to sponsor a closer relationship among these clubs, and to encourage the formation and affiliation of new student clubs. With the first part of the purpose definitely in mind, a tea was given at the home management house of New York State College for Teachers for the executive committees of the home economics clubs of the Eastern District.

The following were discussed:

1. The possibility of sending delegates to the annual meeting at Minneapolis June 28 to July 2, 1926. We saw possibilities for wonderful developments from such contacts.

2. The formation of a national Student Club Committee. Miss Florence E. Winchell instilled in us a desire for such a movement by her clear conception of its possibilities for future development.

3. The state meeting held at New York City April 5 and 6. We advised a full attendance.

4. The advisability of paying state dues promptly.

5. The importance of supporting the Ellen H. Richards Fund in order that the great work thus made possible can be continued was explained. A ten-dollar contribution from each club was urged.

6. Methods of earning money, social and charity work, and home economics activities in general.

7. The importance of cooperation with the college by participation in activities outside the home economics department, such as making costumes for dramatic work, raising money for school memorials, or giving fashion shows for student assembly.

8. Last, but perhaps most important, the question, "What is the Home Economics Club doing for its members?" The importance of being able to lead or follow, as circumstances demand, was realized, the benefits of bringing out the reticent and satisfying the natural-born leaders were stated.

It is perfectly natural that the necessary question of money-making be discussed in any organization. We instituted this year a method for raising money which has proved most fruitful. The club was divided by lot into four groups and to stimulate competition it was decided that the first two groups to raise the twenty-five dollar goal in the six weeks' time limit would be considered winners and entertained at a spring picnic planned by the other two groups. It is interesting to note the variety of devices employed to raise the money. Group I made 168 jars of grapefruit marmalade and sold it to the student body in two weeks. The attractive printed and hand-painted label added distinction and made the product pleasing to the eye as well as to the taste. Group II organized a beauty parlor in which manicuring, shampooing, marcelling, and shoe shining were done with a truly professional result. Group III sold Romeos, a concoction of ice cream, hot fudge, peanuts, and cherries, in the college cafeteria as a noon dessert. These suggestions came to us from the Skidmore College Student Club. Group IV sold baking sheets and chocolate bars. Since marmalade and Romeos would be popular in any college group, it is easily understood that Groups I and III were the first to reach their quota. Although we feel that the $115 raised was an important factor of this undertaking, the cooperative spirit developed was more beneficial to both the club and its members.

The history of our Home Economics Club would not be complete without acknowledging the service of our first faculty advisor, Miss Cora Ann Steele, who continued to be interested in our activities until her death in June, 1925. Throughout the year of 1925-26 we have been considering a fitting memorial and with the cooperation of our

alumnæ and faculty it was made possible for us to purchase a grandfather's clock. Quoting one of our students, "To me a clock is a right memorial, because just as the clock will tick on forever so shall we remember Miss Steele."

We have been hostesses for several teas during the year, but one that was most inspiring was given for Miss Anna M. Cooley, president of the New York State Home Economics Association. The theme of her talk seemed an appropriate motto for an organization such as ours. The simplifying of life's problems, the fruitful use of adventures, and the development of a well-rounded personality are embodied in her quotation from Browning, "See all nor be afraid."

MILDRED E. GRAVES,
MAJORIE M. OTT.

**Teaching Related Science on the Project Basis.** For several years past the home economics department at the University of Minnesota has been responsible for teaching a course in related science to ninth grade girls in the School of Agriculture. This is a secondary school with facilities for teacher-training work and all home economics classes are taught by student teachers under supervision.

The course has been conducted largely on the project basis with a schedule of 4 hours a week for 24 weeks. Some of the problems encountered, the procedure followed, and the apparent advantages of the method may be of general interest.

Most of the pupils are farm girls who have a first hand knowledge of many of the common phenomena of nature but little realization that there are interesting explanations of why these things happen. In this beginning course in science the teacher aims to awaken in these girls a keener interest in the world about them, to teach them how and where to find answers to questions that come to them, and in the end to develop a permanent interest in science and its applications to daily living.

In general the first problem of the teacher is "what shall I teach?" The fact that in this course the girls themselves are to have a part in deciding what topics they shall study makes it difficult to do much specific planning in advance except to locate the things which the teacher thinks may fit the needs and interests of such a class.

The first day that the teacher meets the class she tries to arouse the wonder of the girls before her. Question upon question fired in rapid succession, without stopping for answers at this time, awakens curiosity

and develops an eagerness to find answers to these questions and to others which will lead them into much wider fields.

It is interesting to watch the faces of the girls change from a resigned attitude toward this science course (they frankly admit afterward that they felt sure they would hate it) to a mild interest in what the teacher is talking about, and before the hour is over to a real enthusiasm.

Before the end of the period they are asked to bring, the next day, a list of ten questions which they really want answered. The following questions are taken from a paper exactly as it was passed in.

Why does the sun shine during the day and the moon and stars at night?
How is air formed?
How does water become rain?
Where does heat come from?
How is electricity used?
How do people think?
What makes food grow and why?
How do we get energy?
How does rock become soil?
What are the different uses of plants?

The teacher's next job is to classify the questions presented according to their topics. From one class of 22 girls 135 different questions were collected covering fields of general interest as well as those closely related to the home. Some of the topics included were air, water, astronomy, electricity, food, heat and plants.

By this time there is no lack for subject matter about which the girls want to know, so our next problem becomes that of method.

Going over the classified questions, the class and teacher decide on the topic for study and set up problems connected with different phases of it. For example, under the topic "Bacteria, yeasts, and molds," problems might be: "How to prevent colds;" "The best care of milk on the farm and in the home;" or "An explanation of the process of bread-making."

Once the problems are set up each girl chooses one which she especially wants to study and report on to the class. Before she starts to hunt for information she writes down all the questions which deal with what she wants to know about her topic as well as those which the other members of the class ask. About twenty books on a reference shelf in the science room beside those in the college library furnish adequate

source materials, as well as splendid means of training the girls in the use of books through supervised study periods.

The period when reports are given are particularly interesting. In these there is class discussion on each report, with a summary of important points so that each girl may put these down for further study. Each pupil is held responsible at some later time for all the material covered in class, not only for her own topic.

Since equipment is very limited, most of our experimental work takes the form of demonstrations by either a student or the teacher, except for some very simple experiments which can be done by the class.

Testing of results is accomplished by means of the reports presented, frequent short objective tests, and a final objective test at the end of each term of work. From this testing it is apparent that the girls gain a considerable amount of general, simple scientific information. Better still, there is evidence of an increasing interest, as shown when half of the girls in the class have hands in the air, each wishing to choose her problem first, and when a girl asks if she may look up and report on "the color of the stars" besides her other topic Interest is also shown by their eagerness to get to the bookshelf immediately upon entering the room. The girls often show considerable effort and interest in searching out material, as in the case of girls who come to class announcing that their reports are ready before the appointed time or who voluntarily bring books to class to read to the rest of the group articles relating to topics other than their own.

It certainly showed an attitude of keener observation, inference, and application than the girls had before, when in the class discussion on soap making and the use of lye, a girl burst forth with the statement, "Then there must be lye in wood ashes, because mother pours water through them and makes soap." Some superstitutions which they had previously held have been explained away. One gets some insight into what the course has meant to the pupils from such remarks as these: "This course led my interest to things I had not thought of;" "I have learned the explanation for things that I had always wondered about;" "I have learned basic principles that I find I can apply to everyday life."

The part played by the teacher in this method is most important in creating wonder on the part of the class, in directing the organization of subject matter and reference work, in demonstrating phenomena by experiments, and in emphasizing and summarizing important points.

ELLA J. ROSE,
*University of Minnesota.*

**Visualizing Color, Line, and Design.** The truth of the old saying, "Seeing is believing," was effectively demonstrated by the Extension Service of the University of New Hampshire in its presentation of appropriate dress for women through the medium of fashion shows.

Nine such shows were given during the year, most of them under the auspices of women's clubs, and all directed by the state home demonstration leader. House dresses, afternoon, sport, and evening dresses, coats, hats, and rainy day costumes were displayed on models selected from the local groups. All the garments were furnished by the local stores and were selected as suitable for the four types of figure: the short stout, the tall stout, the short slender, and the tall slender. The models ranged in age from the school girl to the elderly woman.

A talk which preceded the showing of the garments emphasized the three principles of good dress: beauty, modesty, and suitability. Later as each model appeared the leader told why the garments were correct for her type and why the opposite type should not wear them.

The women grasped the suggestions much better than by means of a talk. The local merchants were pleased to lend their gaments both because these fashion shows gave them an opportunity to call attention to shopping possibilities at home, and because they want women educated to choose their garments intelligently, both as to material and as to suitability for the wearer's type and the occasion for which they are to be used.

DAISY DEANE WILLIAMSON,
*New Hampshire State Home Demonstration Leader.*

# BOOKS AND PERIODICALS

## BOOKS RECEIVED

*Elementary Home Economics.* By MARY LOCKWOOD MATTHEWS. (Revised edition.) Boston: Little, Brown, and Company, 1926, pp. 472. $1.40.

*The House and Its Care.* By MARY LOCKWOOD MATTHEWS. Boston: Little, Brown, and Company, 1926, pp. 413. $1.50.

Two textbooks from the press at the same time is something of a record even for a university dean of home economics. "Elementary Home Economics" is, to be sure, a revision of a well-known text issued under the same title in 1921. The 1926 edition, however, contains new sections on family relationships, management of the house, care of children, home nursing, health, and planning and furnishing the bedroom. New material, especially on economic phases of homemaking, has been added to the original text, making a total of about 150 additional pages in the revised edition. The order of subjects also has been changed and Part I is now headed by foods and cookery and Part II by clothing and textiles. New illustrations showing the family gathered around the radio, the 4-H club health champions, the breakfast alcove, and a motor tourists' camp, give an up-to-the-minute air that will make this text appeal to the young girls for whom it is designed.

"The House and Its Care," like Thomas Huxley's definition of science, is "common-sense organized." The common sense in this case begins with the bedroom where a girl is likely to have most personal interest, extends to the bathroom, kitchen, and so on to every part of the house from attic to cellar. But common sense about a house does not stop there. Important general points about selection of site, planning of the home grounds, building materials, construction of the house, and types of architecture are included. The rented house and the apartment are given special mention. The people who are to live in the house and use its furnishings are never lost sight of in the mass of facts. Whether it is bedspreads or bathtubs, or kitchen floors or living room walls, that are being discussed, features that make for durability, ease of care, comfort, and beauty are brought out in a concise way. Nobody can talk about the house and its contents and their care without consciously or unconsciously revealing a standard of living. Students who follow Miss Mattthew's standards can't go far wrong. No matter if some of the illustrations do show furnishings above "average" means. They suggest good principles, and pictures of attractive interiors with inexpensive furnishings are hard to come by.

Just why there should be sections on food selection and meal planning, on home care of the sick, and on care of children in a book by this title is not clear. Perhaps, however, "there's a reason" in the mind of the publisher.

As in many textbooks nowadays, the subject mater is organized into projects, followed by sections on "problems and practice." This volume will undoubtedly take its place as one of the standards for use in high schools and junior colleges.

Any homemaker also would find it an excellent addition to her reference shelf, giving as it does, without waste of words, the basis for intelligent selection of house furnishings and thorough-going methods of upkeep.

RUTH VAN DEMAN,
*U. S. Department of Agriculture.*

***What is What in Groceries.*** Prepared by ALEXANDER TODOROFF. Chicago: The Grocery Trade Publishing House, 5650 West Lake Street, 1926, pp. 208. $2.00.

A clear statement of some of the facts about groceries which the trade thinks housekeepers and home economics teachers should understand; especially convenient for reference on such points as sizes and grades in different lines of canned goods, and trade practice in the use of certain special names or terms; well illustrated and indexed.

*Food Values for Calculating Diabetic and Nephritic Diets.* By LOUISE M. KEEGAN. New York: The Macmillan Company, 1926, pp. 106. $1.60.

Conveniently arranged tables showing the protein, fat, carbohydrates, and calories of energy in various weights of foods used in diabetic diets, the values calculated from those in U. S. Department of Agriculture, Office of Experiment Stations, Bulletin 28; planned primarily for the use of those practically engaged in the preparation of such diets, but likely to be suggestive to teachers of dietetics as well.

*Table Service for the Hostess.* By EDNA SIBLEY TIPTON. New York: D. Appleton and Company, 1926, pp. 129. $1.50.

A well-illustrated volume based largely on the author's contributions to popular magazines for women; addressed chiefly to the woman who wishes to entertain attractively without much service or elaborate equipment; includes suggestions for such devices as plate, tray, and buffet meals as well as for distinctive effects at more formal ones.

*Foods and Cookery.* Compiled for Department of Foods and Nutrition, Division of Home Economics, Iowa State College, by MARGARET H. HAGGART. Ames, Iowa: The Collegiate Press, Inc., for *The Iowa Homemaker*, Division of Home Economics, Iowa State College, 1926, pp. 254. $1.25.

A collection of sensible suggestions and five hundred recipes from the files of the department of food and nutrition at Ames, arranged for the benefit of homemakers who wish to provide well-chosen family meals at a reasonable expenditure of time, effort, and money, but also useful for home economics classes; sold for the benefit of *The Iowa Homemaker*, a student magazine which serves among other purposes as the organ of the Iowa Home Economics Association, with special rates for orders of eight or more copies.

*Manual of Household Work and Management.* By ANNIE BUTTERWORTH. (Fourth edition, revised and enlarged.) London: Longmans, Green and Co., Ltd., 1926, pp. 248. $1.25. (American agent, Longmans, Green, and Company, 55 Fifth Avenue, New York City.)

A well-known handbook for use in English schools and homes, with sensible advice based largely on recognized good practice; interesting to the American reader for comparing current usage in Great Britain and the United States and for some "pointers" not commonly known in this country.

*Textiles. A handbook for the student and the consumer.* By MARY SCHENCK WOOLMAN and ELLEN BEERS MCGOWAN. New York: The Macmillan Company, 1926, pp. 572. $3.00.

A very welcome and thorough revision of one of the best known text and reference books on the subject, first published in 1913. Many sections have been rewritten to bring them into accord with present technical and statistical facts, much new material has been added descriptive of new fibers and processes, and greatly increased attention is given to the social and economic aspects of the subject, especially as it regards the consuming public.

*Fabrics and How to Know Them.* By GRACE GOLDENA DENNY. Second edition, revised and reset. Philadelphia: J. B. Lippincott Company, 1926, pp. 152. $1.50.

A standard book by a former chairman of the Textile Section of the American Home Economics Association, now considerably

revised to include recent fabrics, more material on testing, a new section on the labelling of textile fabrics, and a variety of illustrations; useful for reference by textile classes, homemakers, and the drygoods trade.

*Guidance of Childhood and Youth. Readings in child study.* Compiled by the CHILD STUDY ASSOCIATION OF AMERICA. Edited by BENJAMIN C. GRUENBERG. New York: The Macmillan Company, 1926, pp. 324. $1.50.

A collection of extracts from the literature of child development made with the cooperation of the staff and members of the Child Study Association of America as a sequel to the "Outlines of Child Study" published by Dr. Gruenberg, in 1922. The quotations are arranged in groups to illustrate special phases of the general subject, each group introduced by a brief discussion by the editor, both quotations and discussions supporting the modern concept of the child as a developing organism rather than a finished product, with the maintenance of physical and mental health as the chief aim of child management.

*The Problems of Childhood.* By ANGELO PATRI. Edited by CLINTON E. CARPENTER. With an introduction by LETA S. HOLLINGWORTH. New York: D. Appleton and Company, 1926, pp. 309. $2.00.

Another volume of brief, interesting, popular articles in which Dr. Patri uses his long observation of school children, his understanding of child development, and his skill as a writer to bring home to parents the lifelong differences which right and wrong handling of children may make.

*Adventures in Habit-Craft. Character in the making.* By HENRY PARK SCHAUFFLER. New York: The Macmillan Company, 1926, pp. 164. $2.00.

A method of teaching such desirable character traits as uprightness, good will, and loyalty by the construction of habit-craft models to illustrate in concrete terms the habits under consideration; intended for use with children in church, private, and public schools.

*Problems in Human Reproduction.* By PAUL POPENOE. Baltimore: The Williams & Wilkins Company, 1926, pp. 218. $2.50.

Information concerning recent developments in knowledge of human reproduction brought together from technical sources for the benefit of the general reader and intended to supplement the author's earlier "Modern Marriage," and "The Conservation of the Family." A simple, frank, dignified, and informal discussion.

*Electric Development as an Aid to Agriculture.* By GUY E. TRIPP. New York: The Knickerbocker Press (G. P. Putnam's Sons), 1926, pp. 78. $1.25.

The views of the chairman of the Westinghouse Electric and Manufacturing Company on the influence that modern electric power development may be expected to have on American agriculture.

*Style-Book for Writers and Editors.* By C. O. SYLVESTER MAWSON. New York: Thomas Y. Crowell Company, 1925, pp. 213. $1.50 net.

A convenient, reference book by a well-known lexicographer and teacher of editorial practice, intended not only to state what is good current usage but also to explain the principles on which decisions should be made in doubtful cases; takes a reasonable middle ground on most moot questions; includes various useful details seldom found in such handbooks.

*The Drifting Home.* By ERNEST R. GROVES. Boston: Houghton Mifflin Company, 1926, pp. 217. $1.75.

*A Girl's Problems in Home Economics.* By MABEL B. TRILLING and FLORENCE WILLIAMS. Philadelphia: J. B. Lippincott Company, 1926, pp. 314. $1.28.

# ABSTRACTS FROM PERIODICALS

## FOOD AND NUTRITION

Okey, R., and Erikson, S. E. Studies of the metabolism of women. II. Cyclic variations in uric acid and total nonprotein nitrogen content of blood. *J. Biol. Chem.* 68, 687 (1926).

An extensive study of the nitrogen distribution in the blood of normal young women as affected by menstruation is reported with the conclusion that in most normal women there is a tendency for the blood uric acid to reach a high level immediately preceding menstruation, to fall below normal during the period, and to reach a second high level shortly after the close of the period. The total nonprotein nitrogen of the blood rose during or just after the menstrual period. There appeared to be no consistent cyclic changes in the levels of creatine, creatinine, urea, and amino acids. Various theories are suggested in explanation of the cyclic fluctuations in nitrogen distribution.

Eichelberger, M. The effect of light on creatinine and creatinine excretion and basal metabolism. *J. Biol. Chem.* 69, 17 (1926).

Exposure for an hour to direct sunlight or for 50 minutes to the light of a carbon arc lamp is reported to have had no effect upon the excretion of creatine but to have brought about an increase in the excretion of creatinine during the period of irradiation, followed by a decrease for several hours thereafter in a group of young women subjects and also in two young girls. No significant alterations in basal metabolism resulted from the irradiation.

Foster, G. L., and Sundstroem, E. S. A respiration apparatus for small animals. *J. Biol. Chem.* 69, 565 (1926).

A description with diagram is given of a respiration apparatus of the closed circuit type adapted to the determination of the metabolism of rats under various conditions.

The carbon dioxide absorbers, consisting of two pairs of Kjeldahl flasks joined at the bottom, are arranged on a motor-driven rocking apparatus which causes the absorbing solution (barium hydroxide) to flow back and forth from one flask to the other, thereby drawing the air out of the animal chamber, an ordinary desiccator in which the animal rests on a wire gauze over sulfuric acid. The oxygen reservoir is a one and one-half-liter bottle fitted with a manometer tube and connected by a two-way stopcock with the animal chamber or the atmosphere. The pressure is kept constant by admitting water into the reservoir drop by drop from a burette through the manometer tube.

Marlatt, A. Peas in the diet. *Canner* 63, 29 (1926).

This paper contains a brief description of the commercial process of canning peas, an explanation of the meaning of the trade names applied to the different grades, and suggestions for the appropriate uses of the various grades in food preparation.

Hess, A. F., Weinstock, M., and Sherman, E. The production of antirachitic properties in human milk resulting from irradiation of the mother. *Proc. Soc. Exptl. Biol. Med.* 23, 636 (1926).

That it is possible and at certain seasons advisable to increase the antirachitic properties of human milk by irradiation of the mother has been demonstrated by comparing the curative properties for rachitic rats of breast milk from the same woman before and after she had been irradiated every other day for a month by means of a mercury vapor lamp. The original milk in 25 cc. daily doses was entirely ineffective but the same amount of milk from the same woman after irradiation brought about definite healing and raised the inorganic phosphorus content of the blood of a second series of rachitic rats.

"It seems that an experiment of this kind has a definite application to pediatrics. It

clearly indicates the value of ultra-violet irradiation of the mother during lactation as a preventive of rickets in the baby. Probably during the winter months when the infant is most in need of protection from rickets the intensity of sunlight is insufficient to produce this property in milk."

Hess, A. F., Weinstock, M., and Sherman, E. Antirachitic properties developed in human milk by irradiating the mother. *J. Am. Med. Assoc.* **88**, 24 (1926).

In this complete report of the foregoing study attention is also called to the probable beneficial effect of irradiation on the nutrition and health of the nursing mother, particularly in the protection against excessive drain of calcium and phosphorus.

Tso, E. The value of egg yolk in supplementing diets deficient in calcium. *Am. J. Physiol.* **77**, 192 (1926).

For this investigation the author has had in mind the food habits of the Chinese and has shown that the calcium deficiencies of basal diets composed largely of Chinese staple food stuffs such as soybeans, millet seed, can be supplemented satisfactorily by small additions of egg yolk. In the feeding experiments reported 5 per cent of egg yolk proved as satisfactory a supplement to the deficient diets as 2 per cent of codliver oil. "The results of these experiments have a practical bearing of fundamental significance on the problem of feeding young children in such a country as China where cow's milk is little used. To most households the cost of milk seems almost prohibitive. On the other hand the cost of eggs is extremely low. Therefore the addition of one or two eggs a day to the diet of Chinese children should be of immense value not only in enhancing its vitamin A and vitamin B content and its protein quality, but in improving the calcium metabolism and safeguarding the body against calcium starvation."

Wolfe, K. H. K. A tuberculosis survey of extremely underweight children. *Am. Rev. Tuberculosis* **13**, 506 (1926).

This survey was carried out by the School Health Department of Lincoln, Nebraska, with the financial assistance of the Tuberculosis Committee of that city, for the purpose of finding existing cases of tuberculosis and of gaining information which would help further a program of tuberculosis prevention. Incidentally much was learned concerning the prevalence of other diseases among the school children and the relationship of malnutrition to these diseases. A total of 146 children, all of whom were 15 per cent or more underweight, were examined, of whom 105 received a thorough chest examination. The greatest number, 51, were in the elementary grades, 41 in junior high school and 13 in senior high school.

Eating an excessive amount of sweets, white bread, and meat, and very little milk and fresh vegetables appeared to be the prevailing food habits. Nearly 33 per cent of the children drank no milk at all and about 42 per cent drank one or more cups of coffee daily. Only about 26 per cent ate any vegetables except potatoes.

Of the 105 examined for tuberculosis 64 were found to be tuberculous and it was among this number that insufficient sleep and conditions leading to overfatigue were most prevalent. Tonsil and sinus infections, organic heart defects, and digestive disturbances were present to a relatively large extent. "Malnutrition seems to lay the foundation, not alone for tuberculosis but also for other serious disease conditions in children. This indicates the importance of locating the causes for malnutrition in all children who are chronically underweight."

Peacock, P. R. The action of light on cod-liver oil. *Lancet.* London **2**, 328 (1926).

Exposure of cod-liver oil to light has been shown to be accompanied by a loss in fluorescence and in vitamin A content but no change in antirachitic properties. The fluorescence was gradually restored by keeping the oil in the dark but there was no corresponding recovery of vitamin A. To insure the greatest benefit from cod-liver oil care should be taken to avoid exposure of the oil to the light.

S. L. S.

## TEXTILES AND CLOTHING

Contributed by the staff of the Division of Textiles and Clothing, Bureau of Home Economics U. S. Department of Agriculture

The Linen Industry Research Association. *Text. Recorder* **44**, No. 524, 43 (1926).

This is an English non-profit-sharing company devoted to carrying out and coordinating research into the particular problems presented by the linen industry. It is financed cooperately by the imperial government, the trade, and the government of Northern Ireland.

Its activities have included the establishment of the Research Institute near Belfast, where studies are under way directed to the avoidance of defects in manufacturing processes, the elimination of waste, and research on fundamental problems of the linen industry. This research program covers all important branches of the industry from the growing of the crop to the production of the finished goods. Reports of this work are issued to the members of the association and many are published in the *Journal of the Textile Institute*.—R. O'B.

Recent rayon developments. *Text. World* **70**, No. 20, 41 (1926).

Several developments of interest in connection with increasing the strength, dulling, and waterproofing of rayon have been noted during the past month. German investigators have found that formaldehyde when applied to wet rayon fibers will increase the strength 40 per cent in the dry state and 250 per cent in the wet state. The rayon is impregnated in a solution of 5 parts 40 per cent formaldehyde, 5 parts 80 per cent lactic acid, and 0.5 to 1 part chrome or potassium alum, in 60 parts distilled water. The rayon is then dried slowly for 5 hours. A new method of sizing rayon yarns by treating the yarn in skeins with a mixture of 5 parts of Madison glue, 1 part of soluble starch, 25 parts of Marseilles soap in 1700 parts of water at 50°C. also increases its strength while the yarn remains soft and supple. In an attempt to approximate more clearly the finish of natural silk, aluminum salts, alone or in combination with the ordinary sulfurated vegetable oils, have been used in the dulling experiments. This gave the rayon the desired dullness but imparted a stickiness to its fiber which was troublesome in the winding, quilling, and warping processes. Barium sulfate, properly precipitated on the yarn, secured better results, materially reducing the high luster of the fiber and at the same time permitting it to be safely sized and dyed without affecting the dull finish. To waterproof viscose filaments, the viscose solution is mixed with such suitable substances as sodium aluminate and caustic soda and then spun and coagulated in the regular manner. The waterproofing material being precipitated at the same time that the viscose is coagulated is evenly and completely distributed throughout each individual viscose filament.—A. E. H.

Breton, Norton. The Cyrpus silk industry. *Bull. of the Imperial Inst.* **24**, No. 3, 451 (1926).

A small silk cocoon industry has existed in Cyprus for some time, the cocoons being exported to France or Italy where they have lost their identity. The prices paid the peasants have not been attractive, with the result that the industry has languished. Under the Imperial Institute Advisory Committee on Silk Production and with the cooperation of the Cyprus Department of Agriculture, investigations were made into the possibility of reeling the silk in Cyprus. The result has been the establishment of an up-to-date silk filature to reel Cyprus cocoons near the village of Yeroskipos (Holy Garden). A good description of the various processes involved in preparing the silk for the market is given.—R. O'B.

Kneckt, Edmund, and Hibbert, Eva. Some observations relating to chitin. *J. Soc. Dyers and Colourists* **42**, No. 11, 343 (1926).

A review of the literature pertaining to this substance is given with the object of drawing attention to its usefulness in the textile

industry. The authors started an investigation two years before the death of Dr. Knecht, involving a study of the general properties of the material and the possibility of using it in the making of artificial silk. The method used for preparing the chitin from crab and lobster shells and the properties of the films are given in detail. Exceptions are taken to earlier statements by Kunicke (See JOURNAL OF HOME ECONOMICS 18, 715, 1926).—R. O'B.

Barker, S. G., and Hirst, H. R. Colour problems in the woollen and worsted industries. *J. Text. Inst.* 17, T483 (1926).

The object of this paper is to survey the present position of colour from a physical, chemical, technical, and trade point of view. Three initial problems are: Choice of standard illumination; fastness and durability of a color to the influence of external conditions; and the determination of exact shade of a color and its numerical representation.

The various sources of light used by many different investigators are reviewed. The authors describe the effect of placing various screens between the source of light and the spectograph; a ground glass screen considerably altered the curve of energy distribution and ordinary glass gave a considerable modification.

The American violet carbon arc is among the best obtainable for fading tests. However, it shows little as to what actually happens in sunlight under varying atmospheric conditions. The tungsten carbon arc is being investigated. Light of high intensity does not act relatively the same on all colors as light of low intensity.

The influence of temperature upon fading has been little investigated. Another point requiring investigation is the angle at which the light falls on the fabric during fading tests. The relation of humidity to fading and temperature and humidity combined is very little known. The variation of the fading power of sunlight presents a problem. The slight amount of work already done on this is reviewed.

Commissions from both Germany and America have discussed fastness standards but as yet there is no accepted universal standard. The fastness required depends upon use of fabric and demand often prompts colors obtained only by fugitive dyes. Often mixtures of relatively fast dyes produce a more fugitive dye than either dye alone; while sometimes two notoriously fugitive dyes when mixed produce a fast dye. Other questions are those of suitability of some materials to withstand the processes of dyeing, and the cost of fast dyeing.

The air and various gases influence fading. Dyed fabrics exposed to sunlight in exhausted glass tubes and in tubes filled with inert gases showed a negligible amount of fading. Alkali, alcohol, and pyridine increase the bleaching effect of sunlight. An acid atmosphere, chloroform, and naphtha reduce the amount of fading. The greater the humidity, the greater the fading. Fading appears to be a chemical as well as a physical action. Seven possible chemical reactions are outlined.

The function of water in the fading process is unknown. Unsaturated fatty acids influence fading in direct proportion to the amounts present. Dextrine increases the fastness of dyes. Sunlight has a certain influence upon the undyed wool fiber, liberating free acid from the sulfur it contains. Cotton and wool showed marked differences when exposed to sunlight though dyed with the same dye.

The problem of color measurement is discussed with a brief survey of the various methods available. An instrument for obtaining uniform illumination by daylight over a limited area is described. For purposes of color matching, the most satisfactory instruments are the tintometer, the Eastern colorimeter, and the Guild trichromatic colorimeter.—E. C. P.

Gregory, James. An experimental method for investigating the thermal properties of cotton fabrics. *J. Textile Inst.* 17, T553 (1926).

The British Cotton Industry Research Association, through Mr. Gregory at Shirley Institute, Didsbury, England, has been

studying the influence of the structure of various types of fabrics on the transference of heat. Special reference has been paid to the possibility of maintaining the body at normal temperature under tropical conditions. The requirements of a fabric for efficient tropical clothing are high reflecting and emissive powers, low transmitting power for radiant energy, and a high permeability of moisture.

Experiments are described for determining and comparing the amounts of heat transmitted by different fabrics. It was found that the amounts of heat reflected and transmitted by a fabric were about equal.

The effect of moisture content of the fabric on the transmission and reflection of heat was studied. In each of the cases tested, the amount of heat transmitted was inversely proportional to the moisture content. In the case of reflected heat there was an insignificant change with variation in moisture content of the fabric.

There was variation, as much as one to five, in heat transmitted by different fabrics. This was attributed to differences in the construction of the fabrics, filling, and amounts of cotton per unit area.

The effect of washing on the transmission of heat was tested after one hour's washing and again after twenty hours' washing in soap solution. Fabrics which lost the most weight in washing showed the greatest increase in heat transmission, probably due to the removal of filling. Those fabrics which showed a decrease in heat transmission were without filling, and the decrease was ascribed to shrinkage. Of those studied, a heavy type of cotton which transmitted only a small amount of heat after prolonged washing and, because of its weight, afforded better protection against chill, seemed most suitable for clothing in the tropics.—E. C. P.

Foos, Irvin D. Heat transmission of fabrics. *Textile World* **70**, 3131 (No. 22, p. 27) (1926).

The heat transmission of a fabric is governed primarily by the arrangement of the fiber. The thread count, size, and twist of yarn and the number of nappings are among the factors bearing on the thermal resistance or the warmth. It remains for some manufacturer to develop fabrics of a predetermined heat insulating value. It is desirable also to know the permeability of the fabric to both air and water vapor.

Fabrics transmit heat by conduction of the fibers themselves, by convection of the enmeshed air, by the passage of the evaporated moisture from the body, and by radiation. The test for heat transmission has been separated into three independent parts: 1. The rate of escape of heat through the specimen under definite temperature conditions into still air having a prescribed humidity (conditioned air). 2. The rate of flow of conditioned air through the specimen under definite pressure difference and at a different temperature. 3. The rate of escape of saturated water vapor through the specimen from water maintained at 100°F. (blood heat) to conditioned still air outside. The instrument for making these measurements has been constructed and operated by the Bureau of Standards.—A. E. H.

Ginsberg, Ismar. The effect of sunlight on wool. *Textile Colorist* **48**, No. 574, 667–670 (1926).

Experiments have shown that the physical and chemical properties of wool are affected by sunlight while the wool is still on the animal. The tips of the wool in the area affected by light are yellowish in color and harsh to the feel; under the microscope it is seen that the characteristic scaly structure is destroyed; when placed in a tenth normal NaOH solution the hairs swell at once and curl up. Hairs not subjected to sunlight remain unchanged. Hairs which have not been subjected to polarized light exhibit the normal double refraction, while hairs which have been under the action of sunlight have lost this property entirely. Quantitative determinations of the action of sunlight on wool are based on its easy solubility in dilute acids and alkalies. Further experiments indicate that both natural and artificial coloring matter have a protective action. It has also been shown that the

presence of acids and acid salts increases the destructive action of light, while that of alkalies and alkaline salts have a counter effect. The presence of the acid salts tends to promote the formation of acid substances in woolen fibers under the sun's rays, while when alkalies were present, this tendency is materially reduced. The formation of acids during the exposure to light is due to the splitting of the wool molecule and the oxidation of the sulfur which is thus liberated, to sulfuric acid. The yellowing is due to the sulfuric acid which exerts its well-known charring action. The experiments are described more fully in *Melliand's Textilberichte*.—M. A. C.

Rice, George. Science and art of dyeing modern fabrics. *Natl. Cleaner & Dyer* **17**, No. 11, 67 (1926).

Fabrics composed of more than one kind of material are frequently dyed although the physical properties of the materials may be unlike and the process therefore complex.

A good way to dye a mixture of silk and cotton is to soften the water with a little soda and dissolve the direct dyestuff in it; a bath of soft water is brought to a boil, and the dye added. The previously dampened garment is put into the bath at a temperature of about 190°F. for a full heavy shade, at one somewhat lower for a medium shade, and still lower for a light shade. Most substantive dyestuffs dye silk and cotton mixtures very well in a neutral bath with the addition of Glauber's salt.

Both acid and basic dyestuffs may be used in coloring fabrics made up of silk and cotton, although few acid dyes take well on cotton. Sulfur dyestuffs are also used, but to a more limited extent because they tend to impart harshness to silk. If fastness to cross dyeing is essential, this class of dye is useful.

Whatever dyeing method is used on mixtures of silk and cotton, the water should be soft and there should be sufficient soap to assure lubrication for the silk. In drying, a temperature exceeding 130°F. should be avoided.

Often the precise character of the fiber in a material is not accurately known. What looks like all new wool may be shoddy and cotton and if this is dyed as wool the results are unsatisfactory. If the material contains considerable mixed or reworked fiber, mordants must be used to make the color hold in service. Of the three general methods of dyeing the mordant method is probably the most common. Some goods should be mordanted after dyeing instead of before or during the dyeing.—M. C.

Austin, William E. United States leads in fur dyeing. *Chemicals* **26**, No. 11, 27 (1926).

Prior to 1915, 90 per cent of the dyed furs used in this country were dyed in Europe and such furs as were dyed here were treated with German dyes. Today 95 per cent of dyed furs used here are American-dyed and the industry is virtually independent of Europe for the dyes.

The consumption of coal tar derivatives for fur dyeing comes to $1,000,000 to $1,500,000 annually. These derivatives comprise a range of about forty different individual dyes as compared with about six, ten years ago.

Every color is represented and the chemistry of the reactions is a highly complicated one, quite analogous to the aniline black reactions. American chemists and engineers have succeeded in developing the fur dyeing industry in this country so that today it leads the world in efficiency, modern organization, and progressive ideas. The field is young and offers great opportunities from the viewpoint of the chemist.—M. C.

## CHILD DEVELOPMENT AND PARENTAL EDUCATION

Hoover, Herbert. Our goal—the normal child. Transactions of the Third Annual Meeting. Am. Child Health Assoc. Part 3, 1–6 (1926).

A challenge to the specialist to set up a positive standard of physical, social, and mental health for the child.

Cobb, Stanwood. The Chevy Chase Country Day School. *Childhood Ed.* 3, 160–7 (1926).

A description, with pictures, of a successful school of the progressive type where children from two and a half up are given opportunity for all-around development.

Seham, Max and Gerte. The teacher's responsibility to the tired child. *Childhood Ed.* 3, 168–73 (1926).

Overfatigue results in poor school work. The teacher must know the child's adaptation for work, recognize fatigue symptoms, provide for alternation of play with work under hygienic conditions of seating, lighting, and ventilation.

Horn, Madeline D. Sectional difference in the vocabulary of kindergarten children. *Childhood Ed.* 3, 180–2 (1926).

A discussion, with six tables, showing that sectional differences in vocabulary need no special consideration.

Eliot, Abigail. Educating the parent through the nursery school. *Childhood Ed.* 3, 183–9 (1926).

Active cooperation of parents with the nursery school is essential to the child's best development and depends upon mutual confidence and respect between home and school. Observation and practice by the mothers at the school, conferences and mothers' meetings help the parent to better methods.

Gruenberg, Benjamin C. The sex education of the young child. *Child Study* 4, 3–5 (1926).

Sane attitudes, with correct information and an adequate vocabulary, equip the parent to impart sex education consciously as the occasion arises, unconsciously through his own adjustment.

Exner, M. J. The sex education of the adolescent boy. *Child Study* 4, 5–6 (1926).

Richmond, Winifred. The sex education of the adolescent girl. *Child Study* 4, 7 (1926).

Sane, helpful discussions.

Hoover, H. The search for the perfect child. *Forum* 76, 535 (1926).

The idea of positive health must replace our present interest in prevention of diseases. Specialists must define the normal child as a goal to be attained by education in his needs for proper food, fresh air, play, healthy mental attitudes, and suitable medical attention.

Hollingworth, Leta S., and Monahan, Jane E. Tapping rate of children who test above 135 IQ (Stanford Binet). *J. Ed. Psych.* 17, 505–18 (1926).

These children, selected on the basis of intellectual superiority alone, had a mental age five years and a physical development one year and five months in advance of their chronological age. They are shown to be distinctly superior to unselected children in effective speed of tapping, in both hands; no reliable differences in unidexterity are shown. Strength and speed of hand are slightly correlated. The authors take up the problem confronted in the school placement of such children. Other studies elsewhere reported show them to excel also in scholastic achievement, in size, in strength, and in speed, although there is a great discrepancy in the amount of deviation in intellectual achievement and in size and motor capacity. Such children may be advanced one or two years beyond age-grade norms without showing inferiority in size and motor capacity, but this will not take care of their intellectual needs. The children must either be segregated in special classes or a compromise between intellect and sensori-motor mechanisms be made in their gradings.

Arthur, Grace. The relation of IQ to position in family. *J. Ed. Psych.* **17**, 541–50 (1926).

A study of the IQ of siblings of foreign parentage in one community, in which elder siblings on the average appear inferior in general intelligence to their American contemporaries, while younger siblings equal them. A greater incidence of both superiority and inferiority is found among first-born of both foreign and American stock.

Lowrey, Lawson G. Points in child behavior. *Mental Hyg. Bul.* **4**, 1–4 (1926).

A helpful discussion of the problems of nervousness, disobedience, temper tantrums, dishonesty, and fear, showing the parents' part in developing these reactions.

Gruening, Martha. Learning by living. *New Republic* **48**, 319–21 (1926).

A vivid picture of a Decroly class in a Brussels school.

Fisher, Dorothy Canfield. How children educate their parents. *Progressive Educ.* **3**, 279 (1926).

Children and home offer a liberal education to parents, for through them new fathers and mothers are forced from the immature, egotistic spoiled children their protected lives have made them, away from dependence upon the older generation to become themselves the older generation. They grow in personal responsibility, unselfishness, the feeling of usefulness, satisfaction, and, best of all, are provided with a driving interest in life.

Yeomans, Edward W. Salvaging the family. *Progressive Ed.* **3**, 283 (1926).

The imprint of each generation is stamped upon the next with much of the child spirit stifled by the standardized life of the present. To save the future, cooperation must replace competition in family life, and companionship based on community of interest established. This is best done by providing interesting skills, mainly manual, for leisure time. School curricula must be radically changed, especially to provide training in such skills, with "home work" mostly "making things." The home should provide time, space, and instruction to establish the skills the school begins.

Dummer, Ethel S. Changing ideals of parenthood. *Progressive Educ.* **3**, 289–94 (1926).

"When each parent has found inner harmony, resolved the conflict between the ego-drive and needed response to others, attained emotional maturity, achieving love, socially creative rather than possessive, such home gives stability to a child, orienting him to that 'world full of interest, struggle, and great and splendid hazards.'"

Parsons, Alice Beal. How changing conditions change mothers. *Progressive Educ.* **3**, 295–9 (1926).

A discussion of the changing status of the economic usefulness of woman and its effect upon her children.

Groves, Ernest R. A child needs two parents. *Progressive Educ.* **3**, 300–4 (1926).

Both the father and mother have separate and definite contributions to make to the child's well-rounded development.

Hunt, Jean Lee. Shall we demand efficiency in play? *Progressive Educ.* **3**, 305–11 (1926).

Popular misconception ranks play as amusement, and considers it instinctive. It is rather an activity of which amusement may be an outcome, but not an end. After infancy, it is the outcome of educational influences, and its levels of experience can be enriched and developed under favorable conditions. Proper equipment for play and the stages through which play with plastic materials must develop have been determined. Unending repetitions do not mean efficient play, but should be replaced by constructive play rehearsing the child's knowledge and experience. Play offers opportunities to establish successful attitudes and habits of industry, concentration, responsibility, initiative, and for social adaptations with one's peers.

Morse, Lucia Burton. Cultural contributions of the home to child life. *Progressive Educ.* 3, 312–7 (1926).

A plea that the home prepare the child for rich life through its spirit of quiet harmony, appreciation for the beautiful in art, music, literature, opportunity for creative expression, and an understanding of international fellowship.

Robinson, Virginia P. Records as an aid to understanding children. *Progressive Educ.* 3, 318–22 (1926).

Mothers are urged to record and analyze the facts of child development observed by them. This is valuable both as a contribution to our meager knowledge in this field, and to enable the mother to see her problems more objectively and to separate facts from emotional reaction to them. Kept over a period of time such records give a clear picture of the mother's methods and the child's responses. Small groups of mothers will find it helpful to meet and discuss their records.

Watson, Amey E., and Frank D. Opportunities for parental education. *Progressive Educ.* 3, 323–32 (1926).

Parenthood, as every other profession, is looking toward study and training as preparation for effective solutions of its problems. To insure a child a healthy mind and body, a good education, social efficiency, preparation for living a happy, useful life, the parents should have a knowledge of the laws of human development, physical, psychological, social and spiritual, ability to apply this knowledge to themselves and to their children so as to bring about desired behavior, and consecration to their task. Various national organizations have been formed to emphasize the important rôle parents must play and to help parents to educate themselves for the task, a list of which is given.

Gans, Bird Stein. Child study groups: methods and materials. *Progressive Educ.* 3, 333–7 (1926).

The need for definite help in problems of parenthood is met through the organization of groups of parents for child study, the function of which is to carry to the average parent the fruits of research; to equip him to apply the principles evolved to his own problems; to help him to delimit the application of principles; to equip each, through cooperative self-study, to discern the problems of his own children and to handle them intelligently.

Ready, Marie M. Organized summer camps for children have proved their worth. *School Life*, 12, 24 (1926).

Summer camps, which may provide educational as well as recreational opportunities for boys and girls, have grown steadily in effectiveness and favor. Public schools, municipal recreation departments, extension divisions of agricultural colleges, have established camps for normal children, while special camps for malnourished or tubercular children have proved beneficial. Special training for camp councilors is offered in many schools.

Haviland, Mary S. "Knighthood of youth" —a new solution of an old problem. *School Life* 12, 36 (1926).

The description of a knighthood course in character training intended as an integral part of school life for children between seven and twelve years of age. Five charts, each containing a set of character training exercises in obedience, carefulness, reliability, self-reliance, neatness, politeness, honesty, self-control, good temper, kindness, helpfulness at home, and thrift, are graded according to the age and progress of the child. The knighthood of youth is sponsored by the National Child Welfare Association from which complete information concerning it may be obtained.

Kratz, Ethel. Reading for the junior high school age. *Wilson Bull.* 3, 27–9 (1926).

The period between twelve and fourteen is that of maximum reading, hence the importance of suitable books. A well-selected list of recent books is given.

H. R. H.

## NOTES AND CLIPPINGS

**National Health Booklets.** The service of 20 booklets summarizing what a layman should know regarding certain phases of health which was issued in 1924 by the National Health Council through Funk and Wagnalls has proved so successful that the publication of additional volumes is being considered. Among the new subjects suggested are the care of the eyes, of the ears, nose, and throat; care of the feet; oral hygiene; colds; rheumatism; and diabetes.

**Breast Feeding.** Folder No. 8 in the series issued for free distribution by the Children's Bureau, U. S. Department of Labor, states the main facts on this subject in simple, attractive form.

**Convenient Kitchens.** This is the title of Farmers' Bulletin No. 1513, by Greta Gray, formerly of the Bureau of Home Economics. It is a long-needed publication in which present-day means of obtaining efficiency in the kitchen are discussed with common sense and practicability for homes and families of different types. Considerable attention is paid to remodelling old kitchens and the discussion is illustrated by a generous number of sketches and floor plans. Copies may be obtained on application to a member of congress or to the U. S. Department of Agriculture, Washington.

**Radio Programs.** Among practical hints for radio speakers given by Sam Rickard, chief of the radio service of the U. S. Department of Agriculture, in the *Official Record* for November 24, 1926, are reading a paper aloud in advance to test its "ear quality" and to be sure it speaks smoothly, and making the listener feel he is being talked to or visited with, not lectured at, and in a pleasant, friendly, effective voice. The noon hour from 12.30 to 1 is considered the best for educational farm programs, with 6.30 to 7.30 in the evening as second choice.

**Recipe Booklets in Foreign Trade.** The successful use of translations and adaptations of the recipes published by certain American food manufacturers as aids in selling their goods abroad is the subject of a recent article in *Printers' Ink*, which points out the importance of considering not only language but also local customs and conditions in rearranging material for such use.

**Light Cuts of Meat.** The demand for smaller cuts of meat is leading producers to develop methods by which light carcasses can be profitably marketed, says a news release from the U. S. Department of Agriculture. The results of experiments carried out on a Missouri establishment in cooperation with the state university indicate that calves can be fed on combination of pasturage, suckling, and grain which will develop the desired weight at a cost consistent with profitable marketing of the animal as yearling beef.

**Home Economics in Sierra Leone.** A girls' vocational school in this British West African colony, as described in *The Southern Workman* for October, is departing from educational precedent set by most local mission schools in that it substitutes domestic science and skill in such native crafts as basketry and cloth making, for part of the more usual "literary" work.

**Home Economics in Negro Schools.** Equipment for home economics in negro schools is shown in three new sets of lantern slides issued by the U. S. Department of Agriculture for use by extension workers and others interested in negro education. One deals with textiles and clothing, one with food and nutrition, and one with housekeeping and homemaking. The use of the slides may be obtained on application to the Office of Agricultural Instruction, U. S. Department of Agriculture.

**Prevention of Delinquency.** What we know about methods of preventing delinquency is summarized by Dr. Ralph P. Truitt of the National Committee for

Mental Hygiene in the second of two papers reprinted in "Team Work in the Prevention of Crime," a new pamphlet in the reprint series of publications issued by the Commonwealth Fund Program for the Prevention of Delinquency. Copies may be obtained free on request to the Joint Committee on Methods of Preventing Delinquency, 50 East 42d Street, New York City.

**Pan-American Notes.** In Argentina the National Council of Women is undertaking a new activity called the White Cross Child Welfare Commission, which, according to the *Bulletin* of the Pan-American Union, "will aid institutions and associations to reach needy children, and will also advise women or girls who undertake to care for children and educate them."

The Mexican government last spring sent six cultural missions into outlying states to assist teachers and small communities; on the staff of each was an agricultural instructor, a woman social welfare worker, and a teacher of physical education. Rural schools report increased attendance of both adults and children. In Mexico City five modern open-air schools were built in the past year, and also a girls' industrial school.

At Asuncion, in Paraguay, a series of lectures on child welfare was opened last July with Dr. Andres Gubetich, director of national hygiene and public welfare, as the first speaker.

**Nuts.** Interesting facts about the production of nuts are found in *Geographic News Bulletin* No. 2 for December 6, 1926.

**Jute.** An interesting little article about this fiber suitable for reference use in textile classes appeared in the *Geographic News Bulletin* No. 4 for November 29, 1926.

**Wall-Paper Production.** The value of wall papers produced in 1925 was 13 per cent less than in 1923, says a recent announcement of the U. S. Department of Commerce. The number of establishments reporting had decreased from 51 to 49, and were located chiefly in the Middle Atlantic states and Illinois.

**Size of Apple-Boxes.** At the recent Imperial Fruit Show in London British Columbia growers exhibited apples in boxes only half as large as those commonly used, with two tiers of fruit. The new size was widely approved and is recommended by an agent of the U. S. Department of Agriculture as likely to appeal to retailers and consumers in the United States.

**Volunteers in Social Work.** What part volunteers can and have taken in social work is the subject of a course of lectures which, according to *Better Times*, the Association of Volunteers in Social Service is to conduct this winter at its headquarters, 151 Fifth Avenue, New York City. The Association, which was organized in 1924 "to improve conditions in the field of social work as they relate to volunteers," maintains a speakers' bureau and supplies information about opportunities and training for volunteer workers.

**Boys' and Girls' 4-H Club Work.** Descriptions, pictures, and statistics are all included in the eight-page leaflet by Dr. C. B. Smith recently issued as U. S. Department of Agriculture Miscellaneous Circular No. 77, and obtainable on request to the Department.

**The Progressive Parent.** The articles on this subject which appeared in the issue of *Progressive Education* for October-November-December, 1926, have been reprinted in a pamphlet purchasable for 25 cents a copy from the Progressive Education Association, 10 Jackson Place, Washington, D. C.

# NEWS FROM THE FIELD

## GENERAL

**American Child Health Association.** The annual program meeting for 1927 is to be held in Washington, probably the last week in May. At a recent meeting the Board of Directors endorsed the two-year extension of appropriations for the activities under the Sheppard-Towner Act.

**School Health Programs.** The health organization of the League of Nations is to undertake a study of the school health programs and regulations in the different nations. This was decided upon in response to a request of Dr. Tourumi, representative of Japan on the League's health committee, and will be carried out under the medical director of the League's health organization.

**Hall of Health.** This section of the U. S. National Museum has just opened two more of its proposed series of exhibits: one arranged by the American Dental Association to show the proper care of the teeth and its effect on health and the other by the Bureau of the Biological Survey of the U. S. Department of Agriculture on the transmission of diseases by rodents.

**American Association for the Advancement of Science.** At the Philadelphia meeting, December 28 to 30, papers of interest to home economists were scattered through the programs of several sections. Among them were Enforcement of Building and Housing Legislation, by James Ford, before Section K, social and economic sciences; Determination of Reliability of Consumer's Method of Buying, by Rosamond Cook, Study of Malnutrition in School Children, by Oscar E. Gerney, and Social Interaction of Young Children Observed Under Controlled Conditions as a Measure of Personality, by John E. Anderson, before Section Q, education.

**National Professional Panhellenic Association.** The conference held in Washington November 26 and 27 was devoted largely to the professional opportunities for women. The coordination of home and professional interests was a theme which frequently appeared in the discussions and which was specifically considered by Mrs. Ethel Puffer Howes and Mrs. Lilian Gilbreth. Dr. Louise Stanley presided.

**Dietitians in U. S. Civil Service.** Announcement is made of an open competitive examination for dietitian in the Public Health Service and the Veterans' Bureau. The usual entrance salary in the Public Health Service is $1800 a year or $1020 when quarters, subsistence, and laundry are furnished. Entrance salaries in the Veterans' Bureau range from $1680 to $2040 a year. Applications will be received up to June 30, 1927. Full information and application blanks may be obtained from the U. S. Civil Service Commission, Washington, D. C. or the secretary of the board of U. S. Civil-Service examiners at the post office or custom house in any city.

**Boys and Girls Club Camp.** A national farm boys and girls club camp is to be held on the grounds of the U. S. Department of Agriculture, Washington, D. C., June 16 to 22. Two boys and two girls will be selected as delegates, by each state, and they will be accompanied by a member of the state agricultural extension service in charge of club work. The camp program will include discussion of nation-wide problems of club work with farm young people, educational trips, and a variety of special entertainments. Club members are already at work on plans to provide money for the expenses of delegates.

**American Vocational Association.** At the annual meeting held in Louisville, Kentucky, in November, Genevieve Fisher was elected chairman of the home economics section.

**Furniture Design Competition.** One prize of $2500 and five others of lesser value are

offered through the Art Alliance of America for the best designs of from eight to ten pieces of furniture for a living room. The prizes are provided by S. Karpen and Brothers, furniture manufacturers, who are to own the prize-winning designs. Designs will be received at the Alliance from February 21 to March 5. Further information may be obtained from the Secretary, Furniture Design Committee, Art Alliance of America, 65 East 56th Street, New York City.

**Helen Louise Johnson Memorial.** The League of Advertising Women of New York, at a recent meeting, decided to raise two scholarships in advertising subjects, one of them to be named in memory of Helen Louise Johnson, who had been an active member of the League.

**U. S. Bureau of Standards.** The twenty-fifth anniversary of the Bureau was celebrated on December 4 when the Bureau kept open house and welcomed its friends to inspect its facilities for experimental research. The achievements of the quarter century were reviewed at a banquet at which the guests included a group of distinguished scientists.

**World Federation of Education Association.** The second biennial conference is to be held in Toronto, August 7 to 12, 1927, according to an announcement recently issued by President Augustus O. Thomas.

**Yale Psychoclinic for Infancy Research.** A further grant from the Laura Spelman Rockefeller Memorial has made it possible for the Clinic to enlarge its program and its plans to devote a year to the mental development of normal infants.

**Women's Rural Institutes in England and Wales.** The educational work of women's rural institutes is the subject of a report recently issued by H. M. Inspectors of the Board of Education. The first part describes the history and organization of the Women's Institutes and their National Federation, the second part the educational work carried on in connection with them by the various County Education Authorities. Copies may be purchased for 12 cents (6d) each from the New York representative of His Majesty's Stationery Office, the British Library of Information, Eighth Floor, 44 Whitehall Street, New York City.

**National Child Welfare Association.** Two new series of attractive posters have recently been issued, 17 by 28 inches in size. One series of ten deals with food values and costs $5.00 for the set, or 60 cents per poster, post-paid. The other concerns mouth hygiene and includes ten posters, sold for $6.00 the set or 60 cents per poster. Ten individual posters selected from one or more sets will be sent to one address for 50 cents each. Colored lantern slides are available at 80 cents each. Address National Child Welfare Association, Inc., 70 Fifth Avenue, New York City.

**International Congress on Sexual Research.** The first world congress, recently held in Berlin, was, according to *Science News Letter*, regarded by European sociologists, psychologists, and scientists as "a long step in advance in handling delicate and difficult questions that in the past have been suppressed and silenced with much resulting mischief." Among topics considered were the correlation of internal secretion and sex life, rejuvenation, psychology of sex instincts, laws regarding criminality of sex, sterilization of criminals, the problem of venereal diseases, and the attitude of the churches toward questions of sexual ethics.

### NEW ENGLAND

**New England Home Economics Association.** In a general meeting at the Garland School on November 12, the institutional managers' section presented Mr. Francis Walter, C.P.A., who spoke on "Food control and overhead cost as an aid to efficient management." He said that the institutional manager must not only know the average cost per meal and per serving, but must analyze factors in the total food expense such as purchasing methods, waste, number of employees. A frequent inventory is preferable to a perpetual inventory system which may be inaccurate and is too time-consuming to be practical. Institutional managers were urged to examine their own

work, to show their figures to others, and honestly compare results.

The new home economics in business section, of which Alice Bradley is chairman, has held three well-attended dinner meetings.

The first issue of the *News Letter* for 1926–27 contained news from sections and state associations, reports of the Minneapolis meeting from Alice Blood and Antoinette Roof, write-ups of the Vassar Institute of Euthenics by Annie L. MacLeod, director, and Gladys Beckett Jones, faculty member, and a brief description by Alice Bradley of her European culinary tour. A new feature is a column of personals. The *Letter* is available to members of state associations for 25 cents a year.

The social workers' section has formed a budget council of representatives from the Massachusetts Mothers' Aid Division, the local department of public welfare, private relief organizations, and the section executive committee. S. Agnes Donham, as chairman of the economics section, is assisting the council in working out a uniform terminology for household budgets and in planning for a study of the various divisions of the budget by a committee of specialists.

Speakers have been furnished for several county teachers' associations. The chairman of the teachers' section planned the first sectional meeting of the home economics teachers in Middlesex County. About 400 were present to hear Mr. Herman H. Brase, departments of education and psychology, Lowell Normal School, on "The mental life of the preschool child," and Lillian H. Locke, Teachers College, Columbia University, on "How three garments have changed education."

NEW YORK

**New York Home Economics Association.** *Western District.* At a meeting in Buffalo November 4 and 5, Dr. Benjamin R. Andrews spoke on "The American home," and on "A goal in vocational education," urging that students be given an education in personal economics.

*Eastern District.* The annual meeting was held in Albany October 21 and 22 in cooperation with the Vocational Association and the New York State Teachers Association meetings. On Thursday Adelaide S. Baylor, of the Federal Board for Vocational Education, was guest of honor at the home economics luncheon at the Colony Plaza. Speakers on Thursday afternoon were Miss Baylor and Charles E. Eveleth of the General Electric Company. Section meetings were held later. The Friday meeting was devoted to the report of the program of work committee. Florence Winchell presided, and discussion was led by Ruth Atwater. The election of the following officers was announced: President, Jessie Lane; vice-president, Mrs. Lucy Comfort Downs; secretary, Belle Polhemus; treasurer, Laura F. Thompson.

OHIO

**Ohio State University.** Mrs. Elsie Steiger Minton and Leila C. Ogle each helped five days in meat-cooking demonstrations on the Livestock Special train in which the U. S. Department of Agriculture, the Pennsylvania Railroad, National Livestock and Meat Board, and Ohio State College cooperated.

The class in home economics methods is learning to make exhibits. Two girls prepare an exhibit which is criticized by the rest of the class. A successful one during the football season showed a score card on which were listed players for the team of Happiness, including milk, spinach, fruit, and others, and the rival team Disease, some of whose players were coffee, sodas, cigarettes.

**University of Cincinnati.** The school of household administration is entering its second year with the following additions to its staff: Rosamond C. Cook, director of teacher-training in home economics and head of the department of clothing and textiles; Edith Campbell, social and legal provisions for women and children; Dean Simrall, woman in society; Annie Laws, organization; Alma Knauber, art; Grace Walkup, institution management; Elizabeth

Shelow and J. J. Kobes, biochemistry; and Mr. Carmichael, bacteriology.

Through a gift from the Mothers' Training Center Association a nursery school has been started in the department of child care and training under the supervision of Dr. Arlitt. Marie Acomb is the director of the nursery school, Mrs. Robert Olesen, assistant, Elda Robb, nutrition specialist and Dr. Frank E. Stevenson, pediatrician.

Eleanor R. Maclay is the new head of the department of foods and nutrition, succeeding Florence Otis who was married in August to J. H. Kindle, associate professor mathematics, college of engineering and commerce.

OREGON

**Oregon Agricultural College.** Gladys Ding of Hwa Nan College, Foochow, China, is a graduate student in home economics. The Home Economics Club is helping to bear the cost of her year of study.

Irene Ho, who received her master's degree in home economics here last year, has returned to Yenching University, Pekin, as a member of the home economics faculty.

The new home management house at the University is now complete and will be used next semester.

NORTH DAKOTA

**North Dakota Home Economics Association.** The sixth annual meeting was held in Fargo, October 28 and 29, with a larger attendance than ever before, including many homemakers. The subject of the first afternoon's program was child care. Alma Binzel, of Milwaukee, gave an excellent talk on the mental training of the preschool child. Dr. William De Kline, of the Fargo Child Health Demonstration, discussed the parents' responsibility in child training. On the next afternoon, Mary Barber, of the Kellogg Company, talked on the technique of a food demonstration, followed by a demonstration on canning of chicken by Ina Lindmann, of Ball Brothers Company. In the business meeting which followed, Dorothea Nevramon was elected vice president, Ellen Aageson treasurer, and Mrs. Myrtle Gleason Cole and Clara Flemington councilors.

**North Dakota Agricultural College.** The clothing department has completed a study of the minimum amount, kind, and quality of clothing for an infant during its first year, in a family having an income of $1500. The students selected the clothing and made some of the garments. The information was gathered with the cooperation of stores, nurses, Fargo Child Health Demonstration, and interested mothers, and was used in an exhibit.

The Home Economics Club is raising its quota for the Ellen H. Richards Fund by contributions of birthday money equal to each member's age.

**State Normal and Industrial School, Ellendale.** Ellen H. Richards' birthday, December 3, marked the organization of the first student home economics club. Thirty-six charter members answered roll call. It was unanimously voted to name the club the Lilian E. Tingle Club, for the founder of the home economics department. After a program featuring the life and work of Ellen H. Richards, the club enjoyed a social hour. A contest is being conducted among the members for a motto or slogan.

**University of North Dakota.** Penates, the home economics club, entertained with a silver tea on the afternoon of December 3, the proceeds going to the Ellen H. Richards Fund. Dr. Abbott, of the chemistry department, spoke on his personal impressions of Ellen H. Richards, based on his experiences as a student under her. Two students reported the outstanding facts in her life.

The home economics department entertained Governor Sorlie and members of the budget board at luncheon when they visited the University recently.

PENNSYLVANIA

**Pennsylvania Home Economics Association.** A meeting was held in connection with the Pennsylvania State Education Association meetings in Harrisburg on Wednesday, December 29. Cora Winchell, Teachers College, Columbia University, spoke on modernizing home economics teach-

ing, and Margaret Edwards, American Child Health Association, discussed the place of home economics in the health program.

**Extension Service.** Mrs. Edith D. Davison, supervisor of home economics in Allegheny County, and Norma J. Davis, county demonstration agent, broadcast the following homemakers' program through station KDKA in Pittsburgh: Two neighbors, Making work popular, Home duties, Edible egg dishes, Classy cheese dishes.

**Millville Vocational School.** One of the projects undertaken by the home economics students for this year is planning and furnishing the family kitchen and dining room in the homemaking cottage. The home economics department conducts an information service for the homemakers in the community.

**Reading.** The supervisor and teachers of home economics in the Reading public schools are reconstructing the junior and senior high school curriculum on the basis of the recent survey of needs, interests, and abilities. The revised curriculum and the fine equipment in the new junior and senior high school buildings will make it possible to give excellent training in home economics.

**Gregg Township Vocational School.** Activities of the home economics department on annual Community Day included: 1. A health program in which the senior vocational girls directed grade children in health plays, songs, and games; 2. a health talk and several reels of appropriate pictures; 3. a foods booth where a chicken dinner was served in the evening. 4. a homemaking exhibit of the work of the foods, clothing, house care, and child care classes.

**Indiana State Normal School.** The new four-year home economics curriculum now in operation has resulted in a marked growth in the work. Graduates of this four-year course will receive the degree of bachelor of science in home economics which will certify them for teaching in both vocational and general home economics departments in public schools. Each student carried on a homemaking activity during the summer and at the opening of the school year handed in a report which served as the basis of a conference with a member of the home economics staff.

RHODE ISLAND

**Rhode Island Home Economics Association.** The present membership of 65 is the largest the Association has ever had and it is still growing.

The first meeting of the year, held in connection with the Rhode Island Institute of Instruction, was a luncheon meeting in charge of Ruth Cummings, and attended by 125 people. Mrs. Evelyn S. Tobey of Teachers College, Columbia University, the speaker of the afternoon, gave the group an abundance of helpful suggestions and material for future use.

The second meeting was held at Technical High School on December 4. Clyde Schuman, of the American Red Cross, was the speaker of the afternoon. After the meeting, the Technical High School faculty served ices.

**Cranston.** The Arlington Parent-Teacher Association has turned over a sum of money to the home economics department of the Arlington Grammar School, of which Elfa Streeter is in charge. Last year a donation from the same source was used to purchase a new floor in the foods laboratory.

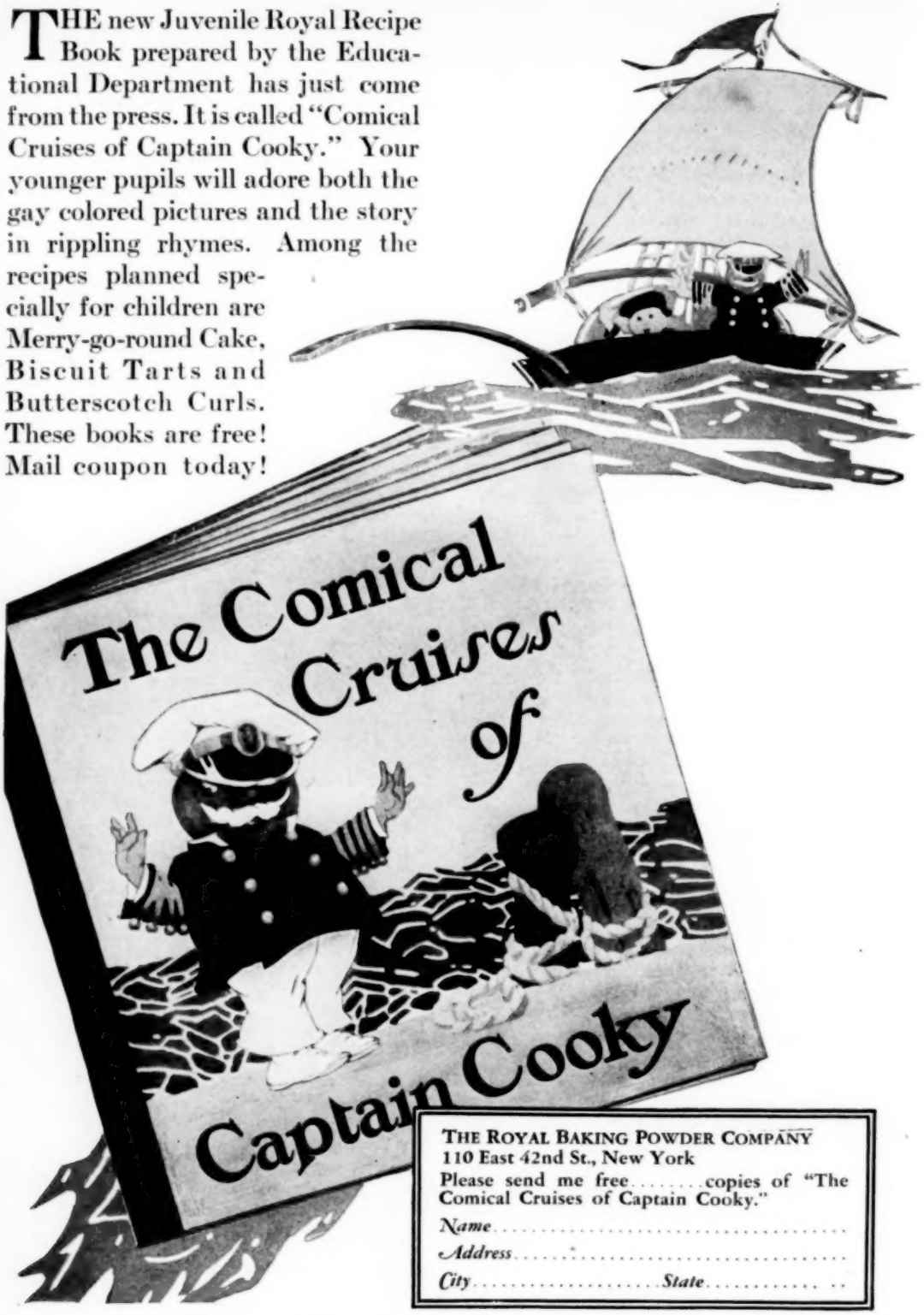
**Rhode Island State College.** Margaret Whittemore is doing reseach work under the Purnell Act at the Experiment Station and part-time teaching in nutrition at the college.

The home management house is under the supervision of Mrs. Wilkie Hines, who is taking the place of Clara M. Taylor. Miss Taylor has accepted an instructorship under Mrs. Rose at Teachers College, Columbia University.

Helen Searles is teaching institutional management, taking the place of Winifred Hazen, who has become educational director at the Caroline W. Putnam Training School in Grand Rapids, Michigan.

Mrs. Agnes M. Bacon, state supervisor of Americanization, gave a course of lectures to the teacher training class, which is under the supervision of Grace C. Whaley, on methods of teaching the foreign-born through home economics channels. In an industrial

THE new Juvenile Royal Recipe Book prepared by the Educational Department has just come from the press. It is called "Comical Cruises of Captain Cooky." Your younger pupils will adore both the gay colored pictures and the story in rippling rhymes. Among the recipes planned specially for children are Merry-go-round Cake, Biscuit Tarts and Butterscotch Curls. These books are free! Mail coupon today!

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state like Rhode Island, it is helpful for teachers to know how to approach these people.

**Pawtucket.** Girls in the clothing classes at the senior high school made aprons and smocks for the Christmas sale of the high school parent-teacher association. Some school time was given to cutting and making the garments, but many were completed at home. Evening classes in millinery also contributed, each member of the second-year class making a very attractive silk rose for a coat boutonniere. Over eighty dollars was realized on sales from the table, which was in charge of Katharine R. Murray, head of the home economics department, assisted by senior girls and wives of faculty members.

Over 700 women have applied for membership in the evening Smith-Hughes home economics classes in Pawtucket high school.

**Northern Rhode Island Farm Bureau.** At recent county fairs, the Bureau showed nutrition exhibits designed to teach food selection to parents, children, and especially to foreign-speaking people. Two miniature houses of attractive design, displayed in a show-case, were labelled the House of Health and the House of Ill Health. Desirable foods were assembled as building materials for the House of Health. Figs covered the walls and served as an attractive background for the orange awnings which shaded the open windows. Graham crackers tiled the roof through which a date chimney showed. A shredded-wheat biscuit formed the doormat directing one down the "milky way" between carrot door posts to the woods and lake where the date man angled for almond fish and watched a prune turtle climb over the bank which a raisin hunter approached on his peanut steed. Shrubs of lettuce, spinach, and parsley surrounded the house, in the rear of which grew celery trees among tomato rocks.

The House of Ill Health was walled with sticky cookies surmounted by dormer windows and a chimney of cheap candies. Coffee covered the roof and sandy yard, which was walled in by loaf sugar. Not a green thing showed in this desert waste, but the rich pastry doormat, sugar walk, and heavily frosted cake door posts easily explained the anemic appearance of the candy boy who was intent upon rolling a doughnut hoop and encouraging the gumdrop cat in his pursuit of a marshmallow mouse.

Children came to the booth day after day and cast their vote for the House of Health, while their parents studied the posters and bulletins which explained why these foods should be chosen.

A county wide clothing meeting held by the Bureau and Extesion Service in Greenville during October was attended by representatives from eleven towns. In spite of bad weather some of the women drove 40 miles to see the demonstration in clothing selection given by Mrs. Elsie Chamberlain of Boston. After a brief discussion on wardrobe planning and prevailing styles, Mrs. Chamberlain showed two wardrobes costing $150 and $250 each. The cheaper wardrobe compared favorably with the more expensive one. Tea was served and the 4-H club girls of Greenville sang club songs.

District meetings were held in Cumberland, North Smithfield, and Warren during November. Mrs. Frances Y. Kline of New York gave demonstrations in attractive methods of preparing fruits, vegetables, leftovers, desserts, and party dishes.

### TEXAS

**Texas State Home Economics Association.** At the meeting in El Paso, Texas, on November 26, Grace Denny of the University of Washington spoke on how to stimulate better standards of taste. The following officers were elected: President, Margaret Weeks, Texas Technological College, Lubbock; vice-president, Emma Pirie; secretary, Jennie Camp, Extension Service, A. & M. College, College Station; treasurer, Edna St. John; news-gatherer, Bess Heflin; director of clubs, Eloise Berry; state councilors, Margaret Gleason and Jennie Hylton.

**Home Economics Conference.** The eighth annual conference was held in El Paso November 22 to 24. Grace Denny and Mr. Stanley Breneiser, head of the art department of the Union High School and Junior College of Santa Maria, California,

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were the chief speakers. Mrs. Vina Robertson Gardner, state supervisor of home economics in New Mexico, also assisted with the conference.

**Texas Technological College, Lubbock.** The Home Economics Club has been active both in regular meetings and in activities connected with the School of Home Economics. For the Armistice Day parade the students prepared an educational float, featuring different departments of the school. In December they held a sale of products from the three departments of food, clothing, and design, the proceeds being used for the student loan fund.

On December 13 the School of Home Economics held open house for the women of Lubbock. The foods department entertained with a Christmas tea. The design department had on exhibition thirty Medici prints of old masters.

The faculty of the School of Home Economics entertained the students at a Twelfth Night party.

**College of Industrial Arts, Denton.** The freshman and sophomore courses in clothing have been reorganized so as to emphasize design, care, hygiene, and economics, rather than construction. The economics of clothing is studied intensively as a foundation for budget work; each student is required to keep a complete account of her expenditures.

On Wednesday evening, December 15, Miss Gleason entertained the home economics faculty at a Christmas dinner in the college cafeteria.

Among the parties given by the girls living in the Ellen H. Richards demonstration cottage was a formal dinner with several faculty members and their wives as guests; a buffet supper with former residents of the house as guests; and an informal tea for members of the home management course who were prospective residents of the cottage.

Eighteen students are doing practice teaching in the city junior and senior high schools in classes of clothing, design, home management, foods, physiology, and home nursing. There are home economics clubs in the schools; the classes have had special displays of their work, held sales to raise money for sending a delegate to the state meeting, encouraged mothers to visit the classes, and distributed sunshine baskets to the needy at Christmas time.

**West Texas State Teachers College.** The new food chemistry and textile laboratory was adequately equipped and ready for use in the winter quarter. The Home Economics Club sent Veda Swafford as its representative to the meeting of the State Home Economics Association at El Paso in November. The club is establishing a loan scholarship fund for a junior or senior who is majoring in home economics.

### VERMONT

**Vermont Home Economics Association.** At the annual meeting held at Montpelier in connection with the State Teachers convention October 21 to 23, Vera A. Perkins, Rutland, was reelected president and Martha Leighton, Burlington, was elected secretary-treasurer. Grace Burwash, University of Vermont, reported on the Minneapolis meeting. Marjorie Heseltine, New York City, spoke on the growth and development of the public school nutrition program. Her paper was of special interest because the Red Cross, under Ruth Thomas, is carrying on a nutrition program in the public schools of Burlington. A similar program is to be put on in Montpelier later in the year. Some of the home economics seniors, who are taking a course in nutrition in the public schools at the University of Vermont, are assisting in the program.

**University of Vermont.** To raise Vermont's quota of $125 for the Ellen H. Richards Fund letters asking their cooperation have been sent out from the home economics department to all the teachers in the state.

**Barton.** A new home management house has recently been opened in connection with the high school.

**White River Junction.** Courses in foods and clothing are being taught in the rural schools as well as in the high school. The home economics teacher visits each rural school once a week.

VIRGINIA

**Hampton Institute.** Mrs. Blanche W. Rollinson, director of the school of home economics, received her master's degree from Columbia University last summer, according to *The Southern Workman*. Among graduates now engaged in home economics teaching are Lillian S. Brosier, '21, at Claflin University, Orangeburg, South Carolina; S. Alice Mullen, at Goldsboro, North Carolina; Melissa R. Stokes, teacher of clothing at Teachers' College, Winston-Salem, North Carolina. Alida P. Banks, '09, is working at the latter institution for a degree as bachelor of science.

WYOMING

**University of Wyoming.** Elizabeth McKittrick, head of the home economics department, attended the meeting of representatives of the Association of Land Grant Colleges in Washington the latter part of November.

**Cody High School.** The Home Economics Club has affiliated with the Wyoming Home Economics Association and will soon affiliate with the American Home Economics Association.

WASHINGTON

**Washington Home Economics Association.** The Eastern Section held its meeting in Spokane, October 28 and 29. The program included addresses by Alice L. Edwards; Mrs. Carl Raney on the preschool child; and Grace Gibson on teaching social relationships. At the business meeting Mrs. Louise Anderson, Cheney Normal, was elected chairman, and Anna McCoy, Spokane, secretary-treasurer.

The western division of the Washington Educational Association held its fortieth annual convention this year in Seattle. A written report of the Minneapolis meeting was sent in by Achsah Matthews, who is in Honolulu. Martha Dresslar, of the University of Washington, gave an account of her impressions of the meeting. "The use of objective tests in home economics" was the subject of a talk, illustrated by charts, given by Hazel Rennoe of South Bend, Indiana. The main talk of the afternoon "The development of taste," was given by Dr. Edwin Guthrie of the University of Washington. He pointed out that we like the old and familiar, which is often unrecognizable in a new setting.

**Seattle Home Economics Club.** The speaker at the November meeting was Dr. H. L. Moore, child specialist of Seattle, who said that because of the mild climate of this northwest section there was no seasonal growth in children as with those of the east, but the final result was the same, nor are there severe diseases and epidemics. Because Seattle is in the goiter belt, he urged early use of preventive foods.

**Seattle.** Henrietta Burgess, home economics instructor in the public schools, is spending the year in Peking, China, studying Chinese art and teaching the fundamentals of art as taught in the American school.

Mrs. Maud G. Barton has returned to Franklin High School after a half year's sabbatical leave spent in travel in the east.

**State College of Washington.** Not only historic costume but home furnishings seem to appeal to the boys, according to present enrollment in various courses.

Plans are being made for an Open House which will enable the Ellen H. Richards Club to get a start toward its share of Washington's quota for the Ellen H. Richards Fund.

As a result of the very successful program carried out last year for Better Homes Week, Edna Irene Avery has again been appointed chairman.